The Lettsomian Lectures

ON

THE AFFECTIONS OF THE URINARY APPARATUS IN CHILDREN.

Delivered before the Medical Society of London.

BY JOHN H. MORGAN, M.A. OXON., F.R.C.S. ENG.,

SURGEON TO CHARING-CROSS HOSPITAL; LECTURER ON SURGICAL PATHOLOGY AND PRACTICAL SURGERY, AND SPECIAL CLINICAL TEACHER OF SURGERY, CHARING-CROSS HOSPITAL MEDICAL SCHOOL; SURGEON TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

LECTURE I.[1]

Delivered on Feb. 7th, 1897.

INTRODUCTION.

MR. PRESIDENT AND GENTLEMEN,—It is no small honour to be chosen by the council of this society to follow in the steps of such distinguished men as are numbered in the roll of former Lettsomian lecturers, and in thanking the society for the distinction so kindly proffered I trust that the selection of my subject may not prove unworthy of the traditions handed down by my predecessors. I was guided by the fact that whilst many have chosen the diseases of childhood as the subject of these lectures, many also have given valuable researches into the treatment of diseases of the urinary organs. I was confirmed in my choice by finding to how small an extent was any special reference made to the diseases of the urinary tract in children and yet how much scattered observation and record there existed on the subject. It will be my earnest effort in these lectures to collect and review much of this wayside literature and to present it to you with such observations of my own as an experience of more than twenty years may seem to warrant.

ABNORMALITIES OF KIDNEYS.

Like other organs of the body the kidneys are not exempt from certain eccentricities of development, but as the majority of instances have been found in the bodies of adult persons who have died from causes unconnected with such conditions it is seldom that these abnormalities have to be reckoned with in early life. A writer (Dr. Englisch) in the *Wiener Medicinische Zeitung* states that a fœtus may attain the age of from seven to eight months with the kidneys wanting or rudimentary, the ureters obliterated, and the bladder undeveloped. In some forty cases he had found atresia of the urethra or absence or defects of the ureters, the fœtus reaching from eight to nine months, and Rayer and others have recorded the absence of kidneys in the fœtus. But notwithstanding some cases which have been published it may at once be said that the subjects of such deficiencies are not viable.

A recognised variation from the normal is found when the two organs are united, either by renal tissue or by a fibrous band, constituting the horse-shoe kidney, the convexity of which always faces downwards, and which lies transversely over the lumbar spine, generally rather lower than the level of the normally placed gland. There are usually two ureters, which pass in front, but sometimes behind, the organ, and the vascular supply is also double. Of this condition there are occasional variations, but so far as regards our present subject the horse-shoe kidney is of interest only as an abnormality, since I have not met with an instance where in the case of a child it has been in itself the source of disease or of difficulty in the diagnosis of other affections. The rarity of its occurrence may be judged by the figures of Mr. Morris, who found only nine instances in 14,318 post-mortem examinations, or about 1 in every 1600. From the records of the post-mortem books of the Hospital for Sick Children, Great Ormond-street, extending over twenty years (1878–1897), which have been searched by Mr. Templeton, the surgical registrar, for this purpose, out of 2594 necropsies only three instances of horse-shoe kidney are noted. In one the left ureter was dilated and one was complicated by imperforate anus.

The kidney may retain more or less its lobulated fœtal form into adult life without any impairment of efficiency.

ABSENCE OF KIDNEY.

The absence of one kidney and a corresponding hypertrophy of the other is a possibility that may have to be reckoned with. The left is by far the most frequently found to be defective. Mr. Morris has been at much pains to estimate the proportion of individuals in which this congenital atrophy of one gland occurs and from a large number of figures he reckons it as happening in one out of rather more than 3500. Quoting again from the hospital statistics there are five instances of aborted kidney in the post-mortem books of the Hospital for Sick Children, Great Ormond-street. Two were on the left side, two on the right, and in one the side is not noted. Two were complicated with imperforate anus and one had the foramen ovale patent; in another the suprarenal capsule was absent and there was also hypospadias. In a girl aged ten years who died after operation for cleft palate the left kidney was atrophied and the left ureter dilated. One instance occurred in which the right kidney was small and consisted of three lobes and the left kidney was a bag of pus, the child dying from uræmia. When the kidney is absent the corresponding suprarenal capsule is also wanting in one out of every ten In Virchow's *Archiv*, 1838, Breuner collected records of forty-eight cases of congenital absence of one kidney, but in all these except five the suprarenals were present. He found also that in one-third of his series there was some malformation or arrest of development in one or other of the genital organs. Out of forty-six cases of single kidney quoted by Rayer and analysed by Mr. Morris four were in young persons between four and fifteen years old, two were in fœtuses, and one in a fœtal monster. In a boy aged five years and four months who died in the Hospital for Sick Children, Great Ormond street, the left kidney alone was present. It weighed 4¾ oz., which is about the weight of the two normal kidneys of a child of the age of five and a half years. The pelvis and ureters were proportionately large. The organ appeared to be quite healthy. There was no trace of a right kidney or ureter and no indication whatever of a ureteral orifice on the right side of the bladder. A case of extreme congenital atrophy of one kidney occurred in a new-born male with imperforate rectum who lived only five days. The right kidney measured one inch and its pelvis was much dilated; the left kidney measured only one-third of an inch and was smaller than a haricot bean.

ABNORMAL POSITION.

In Mr. Morris's work and in the volumes of the Transactions of the Pathological Society will be found many instances of abnormal position of a single kidney, but although the possibility of such an occurrence may be borne in mind in the diagnosis of obscure tumours they are exceedingly rarely met with and need only be suspected when there also exists some one or other congenital malformation such as was found to occur in the two cases mentioned.

Roberts states that in twenty-one cases of congenital malposition of the kidney which he had been able to collect and to compare the abnormality was in every instance confined to one kidney, and the left was much more commonly affected than the right (the left in fifteen cases and the right in six).

The most frequent of these deviations was to find the kidney lying obliquely on the sacro-iliac synchondrosis. In some of the cases the organ was fixed beside the uterus or transversely between the rectum and bladder or across the prominence of the sacrum. Such abnormalities have led to mistakes in diagnosis and even of treatment in the case of adults and in women to trouble in parturition. Only two instances are to be found in our tables. In a boy aged four years, who died from diphtheria, the right kidney lay on the brim of the pelvis and in a girl of the same age the kidneys were fused and lay over the sacral prominence. There were two ureters and the vascular supply was abnormal, but in children it is so easily possible when the muscles are relaxed by an anæsthetic to examine the abdomen, that the absence of a kidney from its normal position or its presence in an unusual one would hardly fail of detection if once suggested. It is of the greatest importance in considering this question that the condition of the organs of generation should be carefully examined, since they frequently exhibit

[1] Lectures II. and III. will be delivered on Feb. 21st and March 7th respectively.

concomitant variations where the kidneys are abnormal. Dr. Guttman [2] quotes the case of a boy, aged fifteen years, with right kidney and ureter wanting as well as the right vesicula seminalis and vas deferens; and in a female, aged twenty years, in whom the right kidney and ureter were absent, the external and internal organs of generation were very defectively developed.

Although instances of complication from this condition are very rare it is one that it is important to bear in mind when dealing with cases of sudden and complete suppression of urine, since in such cases it is possible that one kidney is congenitally absent and the remaining ureter obstructed. Of this Mr. Jonathan Hutchinson has related two instances [3] and another is described by Mr. Pick. Especially is it important both in adults and in children when the question of nephrectomy has to be entertained that all indications of the absence or atrophy of one kidney should be carefully regarded. Although some cases of moveable kidney have been reported as occurring in children where the gland is suspended in a peritoneal fold of its own, the meso-nephron, and where the vessels are of undue length the condition so rarely gives rise to symptoms as to require no discussion.

ABNORMALITIES OF URETERS.

The ureters show frequent aberrations from the normal type. Dr. Ewart has described a case where each organ had two separate ureters which began in distinct pelves and terminated independently in the bladder. All four were pervious. Sometimes two ureters leaving the pelvis of the kidney unite before entering the bladder at the usual situation. This may be seen in a specimen from a child in Charing-cross Hospital museum. The left kidney has a second ureter which arises from the pelvis a good deal higher than the other, which commences at the usual situation. This second ureter runs almost a straight course downwards and joins the proper duct at a right angle about half an inch before its entrance to the bladder. In five instances of double ureter noted in the books of the Hospital for Sick Children, Great Ormond-street, four were on the right side and one on the left. In no case were they the source of disease. Mr. Shattock [4] regards doubling or trebling of the ureter as a reversion to a lower type. In amphibia there are as many ureters as there are segments of the mesonephric kidney. It may be assumed that the portion of the kidney in connexion with the superior of the ureters represents a persistent segment of the mesonephros with its appertaining duct, which has remained functional and supplementary of the metanephros or permanent kidney with which it retains its primitive continuity.

But it is with regard to their causative relations to congenital hydronephrosis that the abnormalities of the ureters are of special interest. In the case of cystic kydney removed by abdominal section and presented by Dr. Day to the Hunterian Museum the ureter was represented by a fibrous cord which was traced down to the bladder and it seemed probable that the impervious ureter was a congenital defect and the cause of the dilated condition of the kidney. Another case in which cystic degeneration of the left kidney took place during intra-uterine life is found in the Transactions of the Pathological Society of London, vol. xxxi., p. 187, where the condition is ascribed to a valvular fold of mucous membrane of the ureter. On the right side the ureter was doubled to within half an inch of its lower end. The anus was imperforate and the bowel transposed. In another instance the left kidney was converted into a cyst in which a few small patches of secreting structure were left and lay in the angle between the diverging common iliac arteries, the ureter was short, narrow, and patent, but its orifice was no larger than a pin's hole and placed inferiorly. In twenty out of fifty-two cases of hydronephrosis Sir W. Roberts found a congenital malformation; in four the ureter was imperforate; in three it entered too obliquely into the pelvis of the kidney; and in two a supernumerary renal artery crossed and compressed the ureter near its origin. Four of these cases lived for periods varying from five years and a half to twenty years and Dr. Hare's patient, where both ureters were coiled on themselves near their origins and adherent to the lower part of the dilated pelvis, thus forming a valve-like obstruction, survived to the age of thirty-eight years. The remainder died at a very early age.

[2] THE LANCET, May 19th, 1883, p. 875, quoted from Virchow's Archiv.
[3] THE LANCET, July 4th, 1874, p. 1.
[4] Transactions of the Pathological Society, vol. xxxvii., p. 289.

HYDRONEPHROSIS.

Among the necropsies at the Hospital for Sick Children, Great Ormond-street, there were twelve cases of dilated pelves or hydronephrosis. Two of these were complicated by imperforate anus, one by harelip, and another by cleft palate. To account for the gradual occurrence of hydronephrosis Roberts assumes that the impediment was at first incomplete though the malformation was congenital, and that its effects were not fully developed until a subsequent period and then probably with extreme slowness. As put by Mr. Greig Smith, "complete obstruction to the urinary flow leads to atrophy rather than dilatation; stricture varying in narrowness predisposes to dilatation." It is probably due to this that in many cases, especially when unilateral, the tumour is small and gives rise to no symptoms, whilst in intermitting cases the swelling will often attain enormous proportions.

In several of the London hospital museums are specimens of hydronephrosis in young persons due to phimosis, and Mr. Morris and Dr. Alexander James have both pointed out that dilatation of the ureters and pelves may be the result of increased frequency of micturition which, by exciting frequent contraction of the walls of the bladder and frequent closure of the vesical orifices of the ureters owing to the anatomical arrangement whereby the ureters traverse the parietes of the bladder, thus occasion frequent resistance to the outflow of urine from the ureters. The same explanation may account for the dilated and tortuous condition of the ureters which is generally found to exist in cases of ectopia vesicæ when, as can be seen, the discharge from the orifices of the ducts is constant.

Newman describes a specimen from the body of a still-born child in which a cyst of about the size of a walnut completely occluded the right ureter and caused enormous distension of the renal pelves, and a similar case occurred at the Hospital for Sick Children, Great Ormond-street, where both kidneys and ureters, which were double on the right side, were dilated in consequence of a small cyst which was found in the bladder, and a few specimens are recorded as resulting from an imperforate urethra. Sutton has recently described four cases of congenital hydronephrosis, in two of which the dilatation of the pelvis was due to the minuteness of the opening of an inadequate ureter; in a third, which was obtained from an infant, the right kidney only was present, the infundibula, pelvis, and ureter were widely dilated, and at the point where the ureter opened into the bladder there was a small circular diaphragm-like valve, which, though offering no obstruction to the flow of fluid from the ureter into the bladder after death, probably acted as a mechanical obstacle during life. He further suggests that compression of the penis between the thighs, or between the thigh and pelvis when the legs are flexed on the trunk during fœtal life, might explain the retention which gives rise to prenatal hydronephrosis.

These being the main congenital causes of hydronephrosis it is important to notice the frequency with which both kidneys are affected. Out of twenty cases collected by Sir William Roberts in thirteen the condition was bilateral—a statement which must be borne in mind in considering the question of nephrectomy. Two of these perished stillborn, one lived six hours, one thirty, and one forty-six hours, while one died twenty days, and another between three and four months, after birth. In other cases where life was prolonged "we must assume," says Sir William Roberts, "that the impediment to the urinary flow was at first incomplete, though the malformation was congenital, and that its effects were not fully developed until a subsequent period and then probably with extreme slowness."

It is unnecessary to describe here the well-known appearance of kidneys affected by this condition. Generally they present a mere fibrous skeleton of the gland with the pelvis and calyces enormously dilated and the secreting structure to a great extent and sometimes entirely absorbed. The surface shows numerous rounded elevations bounded by fibrous septa and corresponding to the lobules of which the fœtal kidney is composed. The fluid which is contained in such a sac is of a low specific gravity and contains little urea or uric acid.

As already indicated in the foregoing enumeration of causes the effects may be immediate or remote. If the condition affects both kidneys death usually occurs at a very early period. If, on the other hand, it be unilateral and due to permanent obstruction of the ureter there may be

no symptoms and life may be prolonged to its natural term. When, however, the cause is intermittent, as in many instances that have been given, a tumour is produced which requires to be differentiated from other similar swellings. In the absence of any history of severe crush or blow it will not be confused with a perirenal hæmatoma or perinephritic abscess. Notably it may need to be distinguished from ascites, especially if both kidneys are involved, which can, however, hardly ever be the case, and where the one kidney only is affected the permanent dulness on the affected side in all positions, and the uneven surface of the tumour as contrasted with the even surface of the abdomen, with the shifting of the fluid and the accompanying anasarca, will probably make the distinction an easy matter. From the rare cases of ovarian cysts in children the tumour would be distinguishable by the presence of the colon in front and by the dulness in the lumbar region of the side affected. Hydatids of the kidney are very rare in children and their presence could only be surmised by the detection of the hydatid fremitus and by the passage of cysts with the urine. One is described by Mr. Bruce Clarke as having been found in the kidney of a boy who died from rupture of the stomach and one was found post mortem in a child who died at the Hospital for Sick Children, Great Ormond-street. The presence of pus in the urine and the accompanying pyrexia would indicate the condition of pyonephrosis whether engrafted upon the cystic condition or arising in consequence of a calculus in any part of the tract or due to tuberculous disease. The region of the kidney is occasionally the site of tumours of the character of cystic hygroma and such a one is described by Sir T. Smith and was exhibited by him at the Pathological Society of London. The tumour weighed 14 lb. and was removed from a child seventeen months old whose weight was more than half made up by the disease. It was first noticed at the age of three months when it appeared to be of the size of an orange. Although from the first the disease made very rapid progress it was not accompanied by any special cachexia and, until by its size and weight the tumour interrupted the functions of the abdominal viscera, the child's health was unaffected. When this, however, took place the child rapidly emaciated and died from inanition. After death the tumour was found to be behind the parietal layer of the peritoneum which was tightly stretched over its anterior surface. It was covered by a distinct capsule and had formed no connexion either by adhesion or infiltration with surrounding parts. It originated in the substance of the left kidney, the remains of which, unaltered in structure, were found spread out in a thin layer over its posterior surface. The ureter was healthy, there was no affection of the lymphatic glands and the remaining viscera were unaffected. On dissection the tumour was found to contain numerous cysts embedded in a coarse fibrous or reticulated structure. The cysts were of various sizes; the larger ones contained others of smaller dimensions springing from their inner surface. On microscopic examination the solid parts were found to be of a fibro-cellular structure, the cellular elements predominating over the fibrous. The cysts contained a clear serous fluid.

In the eighteenth volume of the Transactions of the Royal Medical and Chirurgical Society Mr. Cæsar Hawkins described a cyst which filled the entire right side of the abdomen in a boy aged six years. In the walls of the cyst was a small third kidney which had no excretory duct. The cyst was punctured during life and five pints of aqueous fluid, free from albumin and urinary salts, were found in it after death.

Although not arising in, or directly connected with, the kidney other congenital cysts are found to occur in the neighbourhood which might be confused with those with which we are now concerned. Such are the various forms of mesenteric cysts described by Mr. Treves in his work on surgery, and others related by Mr. Moynihan,[5] one of which occurred in a girl, aged six years, and was multilocular, and two others are described in the *Annals of Surgery*, June, 1897, one of which occurred in a child, aged four years, and another in a boy, aged eight years, which attained enormous size. It was twice tapped and finally removed, when it was found to be multilocular and attached to the great omentum by its entire width below the margin of the transverse colon, within the folds of which the cyst had developed. Two interesting cases in which the cysts were removed have recently been related by Mr. Eve in a paper read before the Royal Medical and Chirurgical Society.

[5] Annals of Surgery, July, 1897.

In a congenital hydronephrosis there is one sign which only occasionally is given but which is definitely reliable as indicating the nature of these tumours—viz., the sudden subsidence of the swelling followed by an increase in the flow of urine. If the dilatation becomes sufficient to form a tumour, which it may do at any time between the third and eleventh year or even later, the necessity for surgical interference will arise, partly as a means of diagnosing the exact nature of the swelling and partly to relieve the patient of the inconvenience and sometimes even of the pain and the effects of pressure upon the intestines which occasionally result. A trial may first be made of systematic rubbing, which was successful in the case of a girl, aged eight years, under the care of Sir William Roberts, who suddenly passed a large quantity of urine, when the swelling subsided and did not return. The same treatment was temporarily successful in a child, aged three months, under the care of Sir William Broadbent and in a third case under the care of Mr. Thurnam in a boy aged four months. But where this treatment is not available either on account of the pain caused or the risk of rupturing the cyst the fluid must be withdrawn by the aspirator or trocar. In the absence of any very distinctly fluctuating area Mr. Morris directs that in the case of the left kidney the puncture should be made just anterior to the last intercostal space, whilst on the right side, to avoid all risk of injuring the liver, it should be half-way between the last rib and the crest of the ilium between two inches and two and a half inches behind the anterior superior spine of the ilium.

The fluid thus released often amounts to a very large quantity and is of a brownish colour and contains urates and urea. As a rule it reaccumulates very rapidly and fresh tappings are required. The most notable instance of recovery by this means is in the case related by Dr. Hillier of a boy, aged four years, who was repeatedly tapped and after one of the tappings a quantity of fluid was passed from the bladder exactly similar to that from the cyst, a temporary communication thus obviously being established between the cyst and the bladder. This continued to occur. It was presumed that a congenital malformation of the right ureter existed which rendered it liable to occlusion but admitted under some circumstances of the passage of fluid. The boy died four years later from cerebral symptoms and the right kidney was found to be converted into an enormous cyst. The right ureter was abnormally constricted, especially at its vesical end, so that fluid did not escape into the bladder until a fine probe had been passed.

Although this proceeding is occasionally successful and the insertion and retention of a drainage tube has been followed by temporary relief the operation that is most satisfactory is nephrotomy, followed by tapping of the cyst, and attachment of the margins of the incision in the tumour to the edges of the wound in the loin. Through the indiarubber drainage-tube which is inserted all discharges can readily pass and be caught in a suitable appliance. Mr. Newman quotes four cases in children under twelve years of age all of which were successful. In three the lumbar incision was used and in one the cyst was reached from the abdominal surface. Mr. Symonds and Dr. Tuckwell relate[6] the case of a boy, aged eleven years, with a large hydronephrosis. Nothing had been noticed until fifteen months before admission. The swelling was aspirated and from three to four pints of turbid dark-brown fluid, containing altered blood, albumin and urea were withdrawn. The cyst rapidly refilled and was incised and similar fluid evacuated. The opening became obstructed and the sac became larger than ever. A fresh tube was inserted and drainage continued for six months when all healed. In this case normal urine showed a healthy state of the opposite kidney.

Should the sac suppurate and the discharge become a source of exhaustion and should there be evidence that the renal tissue is incapable of performing its function lumbar nephrectomy may be called for. Mr. Newman's tables give eight cases in children under twelve years of age where the kidney was removed for hydronephrosis; six recovered and two died. In four of the cases the abdominal incision was resorted to, in the other four the lumbar incision, one death occurring in the case of each. To those may be added a case of a girl, aged thirteen years, from whom a large hydronephrotic kidney was successfully removed by my colleague Mr. Owen.[7] The abdomen was opened in the middle line

[6] See THE LANCET, July 29th, 1882, p. 141.
[7] THE LANCET, Dec. 4th, 1897, p. 1453.

and the tumour consisted of one large cyst about the size of a fœtal head, occupying the position of the pelvis; the kidney tissue was stretched, and involving the upper infundibula was another dilatation which opened freely into the larger cavity. A considerable amount of healthy renal tissue remained at the lower part and presented congenital lobulation. The patient made an excellent recovery.

The possibility of involvement of the opposite kidney must always be borne in mind in operating upon these cases. Only recently a child who had for some months been in the medical wards of the Hospital for Sick Children at Great Ormond-street suffering from symptoms of intestinal obstruction was transferred to the surgeons on account of a tumour which developed on the right side of the abdomen. The urine had for some time been purulent. The child was aged four years and was otherwise well-formed. Mr. Pitts opened the abdomen by Langenbuch's incision and felt what he took to be a healthy kidney on the left side. The tumour, which proved to be an intensely dilated kidney with most of the secreting structure destroyed, was then removed. No urine was subsequently passed and the child died at the end of three days. At the necropsy it was found that the left kidney was almost non-existent and quite incapable of function. A ureter of the natural size and patent opened into the bladder at the normal site and the suprarenal capsule was normal in size and position. The right ureter was greatly dilated and its orifice was exceedingly small.

CONGENITAL CYSTIC KIDNEY.

In the Hunterian and a few other London museums are to be found specimens of kidneys taken from fœtuses or newly-born children where the whole gland is converted into a congeries of cysts. Quite recently Dr. Still has described a specimen which was removed from the body of a girl aged three weeks. The child was born prematurely at the eighth month. Both kidneys were affected and together weighed 15 oz. The capsule stripped easily and the surface presented a translucent appearance which was seen to be due to innumerable closely packed cysts, none of which projected on the surface. On section the whole kidney had a honeycomb appearance due to numerous small, more or less tubular, cavities separated from one another only by fine septa; these cavities seem to be more developed in the cortex than in the pyramids. The pelves and ureters were normal. The liver in this case, as in many others that have been described, also showed on section numerous small cavities. This condition is bilateral and is ascribed by Virchow to intra-uterine nephritis or to impaction of the straight tubules with uric acid, both of which lead to atrophy of the papillæ and obliteration of the pelvis of the kidney. Koster considers it to be due to a malformation of the lower urinary tract. Mr. Shattock regarding this condition from the developmental point of view argues that it results from a want of differentiation of the metanephric blastema, out of which the permanent kidney is developed, from that of the meso-nephron or Wolffian body. The proper tissue of the kidney grows into that of the Wolffian body, while the remnants of the latter become the seats of the cysts scattered through the proper renal tissue. The enlargement of the cysts may by irritative tension upon the intertubular tissue produce an excess of this tissue and cause the origin of the urinary retention cysts and the presence of these cysts would certainly produce secondary pressure on the proper renal tubules and thus lead to the formation of true renal retention cysts. Dr. Still, whose interesting paper will be found in the next volume of the Transactions of the Pathological Society of London, adopts this view, and putting aside the theory of intra-uterine inflammation believes that the same cystic condition which is found in adults from fifty to seventy years of age is due to the presence of glomeruli and tubules which for a long period retain a healthy condition. These states are rare and are of more interest to the pathologist than the surgeon.

Children, and particularly boys, are liable to injuries from crushes or from the passage of wheels over the abdomen which produce lesions of the kidney or ureter or the tissues which envelop them. In the latter case there may be nothing but a circumscribed collection of effused blood, which may be absorbed or may become surrounded by lymph in which it is encapsuled and from charges of the constituents a cyst is formed which is variously styled perirenal or paranephric. Or again the effusion may break down and forming an abscess give rise to all the constitutional effects of suppuration and ultimately point in the ilio-costal region. But this perirenal extravasation is often followed at a period of from two weeks to two months by a swelling containing more or less clear fluid with some of the constituents of the urine. These have been shown by Mr. Barker to vary inversely to the amount of pressure within the sac which forms around the extravasation. These effusions are liable to suppurate or to rupture into the peritoneum. The most notable instance of the last occurrence is related by Mr. Taylor, where as a result of injury in a girl, aged fifteen years, an accumulation formed which burst into the peritoneum giving rise to symptoms of profound shock. An opening was made in the median line, the peritoneum was sponged out and the wall of the cyst stitched to the edges of the incision. This opening closed and a second had to be made on the outer side of the rectus. The patient recovered and a glass tube was worn in the fistula through which the urine passed.

Previously to this Mr. Stanley had described the case of a boy, aged nine years, in whom a circumscribed swelling appeared six weeks after injury. This was punctured on six different occasions and the boy was discharged though a swelling remained. Several other cases are recorded. One where a boy, aged seven years, who had been knocked down by a van eleven months previously, came a second time under the care of Mr. Godlee, who had attended him soon after the accident but had discharged him as convalescent. There existed a large tumour occupying the whole of the epigastric region. This was cut down upon and 43 oz. of turbid, whitish-yellow fluid were drawn off, the margins of the opening into the cyst were stitched to the edges of the abdominal wound and a drainage-tube inserted. In a case related by Mr. J. Marshall a girl, aged thirteen years, was run over across the loins and apparently recovered, but nine months later was found to have a fluctuating tumour over the left side of the abdomen. This was first aspirated but afterwards drained antiseptically with a successful result.

In Mr. Barker's case again the child, aged three years and eight months, was run over in August and passed some urine containing blood clots. She did well at first but was readmitted three weeks after the accident with a fluctuating swelling of the character of a hydronephrosis and there was no evidence that any urine from the affected side was entering the bladder. As the constitutional symptoms became serious the tumour was first aspirated, then drained and finally removed on Nov. 19th, the patient making a good recovery.

Lastly, in Mr. Croft's case, a boy, aged twelve years, met with a fall which injured his left side and loin. There followed pain and hæmaturia. He was admitted to hospital but discharged as convalescent. On the forty-ninth day after the accident he was readmitted with a swelling in the left lumbar and hypochondriac regions, but without any blood in the urine. 79 oz. of urine-coloured fluid were withdrawn by the aspirator. Altogether the tapping was performed eight times and after the last occasion no swelling recurred.

From this brief relation of the more important of several recorded cases the course and symptoms of this accident can be gathered. After the first symptoms of shock, followed generally by vomiting, there is more or less hæmaturia lasting for two or three days. If the ureter becomes blocked with clots there is considerable pain which is referred to the loins and runs down to the testes. These symptoms may be induced by a simple bruise of the kidney, but if there be rupture of the ureter or pelvis or laceration of the gland structure in the course of time a tumour will appear which may attain a very large size and form what has been termed a spurious hydronephrosis. In a case under the care of Mr. Pitts, of a girl, aged nine years, who had been run over by a hansom cab six weeks previously 41 oz. of clear fluid were removed by tapping and the swelling was reduced by massage.

Unless it becomes necessary to cut down upon the kidney or to remove it the actual lesion can only be guessed. The ureter may be blocked with clots which when passed will allow the passage of urine and the patient shows no further sign of the injury. Or the amount of blood may be such as to excite an acute cystitis as in the case that is described by Dr. Rawdon of a boy, aged twelve years, who injured the right kidney by a fall. The hæmaturia was followed by cystitis and to avoid further hæmorrhage the kidney was removed by a lumbar incision and was found to be torn completely across. Four days later lateral cystotomy was

performed and a free drain established. The patient died on the fortieth day from pyelitis and circumscribed suppuration of the left kidney.

The treatment of these injuries therefore is in the first instance to check further hæmorrhage and to subdue pain, then to watch carefully for any changes indicating suppuration in the effusion or the formation of swelling by the secretion of the kidney. Aspiration may be tried and supplemented by gentle massage, but if the swelling increase or if there be any signs of suppuration a lumbar incision must be made and the state of the kidney investigated. If this be ruptured it must be removed, but if not a drainage-tube must be inserted and the cavity washed out with antiseptic solution until it closes. In removal of the kidney under these circumstances the surgeon may count upon the healthy state of the opposite organ unless there is reason to fear that it also has been damaged by the accident, although one case is recorded where rupture took place of a single hypertrophied kidney.

Apart from traumatic causes perinephritis and perirenal abscess are very rare in children. The post-mortem books of the Hospital for Sick Children, Great Ormond-street, record but very few instances and the majority of these are due to pyæmia. Calculus in the kidney, though producing pyelitis, seldom gives rise to inflammation in the surrounding tissue. Dr. Gibney reports twenty-eight cases of primary perinephritis in children, the majority occurring between the ages of three and six years. Most of the cases had been diagnosed as disease of the hip-joint or of the spine. Resolution followed in twelve and sixteen ended in suppuration. Personally I have met with few, but one case that was sent to me was that of a boy, aged eight years, who presented many of the features of hip-joint disease. A large abscess soon presented itself in the iliac region which was not due to spinal caries and was not apparently perityphlitic. There was a history of a kick upon the loin some time previously. A large abscess was opened and drained through the lumbar region. All the hip symptoms passed away and he is now strong and healthy. Exploration showed the abscess to surround the kidney.

Symptomatology of Hæmaturia.

Before passing to other diseases of the kidney it may be well to review the causes of the presence of blood in the urine. Hæmaturia may indicate a local or a general disease and the detection of its origin must always be of primary importance. It may arise from any part of the tract and may be so minute as to escape all but the most careful search by the microscope or by tests. It may be constant and slight or profuse and intermittent. Apart from poisoning by such drugs as chlorate of potash, cantharides, turpentine, carbolic acid, and rhubarb small quantities of blood are found in the urine of young infants as the result of irritation of the tissue of the kidney by uric acid and other crystals; when more abundant it occurs in connexion with the other evidences of scurvy rickets, of which it is sometimes the earliest symptom. In purpura the hæmorrhage from the kidney is often profuse with intervals of intermittence and in hæmophilia it is also common. Dr. J. Abercrombie has recorded a case of Raynaud's disease in which a little boy passed bloody urine day after day for six weeks together in the colder seasons, which ceased when the child was kept warm before the fire. In vol. xv. of the Transactions of this society will be found a very interesting account of a case of Raynaud's disease with paroxysmal hæmoglobinuria by Dr. Haig in which he says that his previous researches led him to believe that both the Raynaud's disease and the hæmoglobinuria in this case (that of a girl aged six years) were due to an excess of uric acid in the blood (uricacidæmia), and this theory affords a most simple explanation of their evident connexion. Blood in smaller quantities occurs in Bright's disease, in hæmorrhagic measles, in scarlet fever, diphtheria, and small-pox. What has been named Winckel's disease, in which cyanosis, jaundice, and hæmoglobinuria attack new-born children on or about the fourth day and cause death in forty-eight hours, has not been observed in this country; but paroxysmal hæmaturia or hæmoglobinuria, where no blood corpuscles can be detected, but the urine is nevertheless stained with blood pigment, has been fairly often detected. Dr. Herringham has described the cases of two sisters aged three and a half years and four and a half years who were hereditarily syphilitic, and Dr. Voelcker, who has noted several others, finds a syphilitic taint in all of them. I have, however, seen a typical case in private where no such suspicion could have existed. But it is as a symptom of local affections that hæmaturia is of diagnostic value to the surgeon and of these I shall have to speak later. As a general rule hæmorrhage from the kidney is more profuse than from the bladder and is seldom accompanied by pain unless it gives rise to the formation of clots in the ureter, when the pain may be referred to the loin, the testes, or the thigh, but ceases as soon as the clot is washed onwards to the bladder. The origin of the hæmorrhage from the kidney is generally confirmed by the presence of casts and epithelium. In examining cases of supposed hæmaturia it is well to keep one's eyes open to the possibility of deception, as instanced by the case narrated in the Transactions of the Clinical Society of London, vol xxiv., by my late colleague, Mr. Leopold Hudson, of a boy, aged eleven years, who gave a history of suffering from the usual symptoms of stone and brought a specimen of his urine with a red stain which was afterwards found to have been produced by steeping in his urine a piece of rag stained with Turkey red dye.

Tuberculosis of the Kidney.

The acute miliary form of tuberculosis which affects the kidney is only a local manifestation of a general disease and is very commonly in children associated with tuberculous phthisis or meningitis. Dr. Dickinson found that in nearly a sixth of all children dying thus affected tubercle was present in the kidneys and states that renal tubercle is nearly three times more frequent under than over the age of twelve years. Of twenty-eight children under twelve years of age both kidneys were affected in nineteen, one only in nine, and the sexes were attacked impartially. Out of twenty-four children dying under the age of twelve years with the kidneys involved thirteen died under five years of age and eleven between the ages of five and twelve years. This corresponds with the estimate of Rilliet and Barthez, who found that in 315 tuberculous children tubercle of the kidney was present in 49 or 15 per cent., and that therefore the kidney was three times more liable to tuberculous deposits in children than in adults. The invasion of this organ is seldom marked by any distinct symptoms and the affection of the kidney is disguised by the more evident signs of disease which are manifested in the lungs or the brain. Such conditions, therefore, admit of no surgical treatment. When the disease originates in the urinary organs the infection may be conveyed by three sources. The principal and commonest is by the blood. Secondly, it may ascend by the ureters or lymphatics from the bladder; or, thirdly, it may extend from the surroundings of the gland. I shall have to speak of the second of these sources when dealing with tuberculosis of the bladder.

Chronic localised tuberculosis or strumous disease of the kidney is by no means frequent in children. Out of fifteen cases collected by Mr. Morris there was not one instance in a child younger than eleven years. The pathological history of the affection is the same as that of the disease in other organs. The bacilli conveyed in the blood-stream to the glomeruli for elimination must of necessity cause great risk of infection and consequently the principal seats of the early deposits are the apices of the papillæ, the calyces, or the pelvis of the gland. First are deposited the miliary nodules and these coalesce to form caseous masses. As these break down fresh nodules are deposited in other parts and the caseous necrosis that ensues lays bare an ulcerating surface in the pelvis, whilst in the periphery they form irregular cavities. As more and more renal substance becomes involved these cavities coalesce and the secreting structure may be entirely destroyed. Generally the pelvis of the kidney and the ureter become thickened, the mucous membrane ulcerates and its lumen is occluded. If the ureter remains pervious the débris may be washed away and in its course will almost surely involve the parts below and thence the disease may ascend to the opposite organ. If, however, the ureter becomes blocked the whole organ may be converted into a large abscess cavity or series of cavities with caseous débris—tuberculous pyonephrosis. Sometimes the obliteration of the ureter causes the whole organ to be converted into a shrunken putty-like mass, or large abscesses may result by reason of the access of pyogenic organisms.

In view of the rarity of this affection in childhood it might seem hardly worth while to linger over its symptoms or its diagnostic difficulties, yet there has been a sufficient number of cases in which operation has been satisfactory to encourage the hope that a larger number of successes might

follow an earlier recognition of the affection. This is, however, a matter of peculiar difficulty at all ages and especially in young patients, since the symptoms in the earlier stages are little marked and local signs are absent, whilst, on the other hand, when evidence is more pronounced, when the urine becomes constantly purulent, and vesical irritation is a marked characteristic, the disease has so far involved other portions of the tract that only palliative treatment can relieve.

It becomes, then, of the utmost importance to examine closely all signs which may indicate an early invasion of the gland. The symptom so common to many other affections, thamuria, or frequency of micturition, is here also that which directs attention to the possibility of some morbid condition in the kidney, and when all other causes can be eliminated the region of the kidneys should be carefully palpated and the question of tenderness investigated and any history of pain in the loin or in the testes examined. Any increase of size in either gland can best be appreciated with the aid of an anæsthetic. The urine offers few indications in the earlier stages except that its quantity is often increased and the specific gravity is frequently low. At a later period it becomes purulent and, as distinguished from calculous pyelitis, where the amount of pus is intermittent, in scrofulous disease it is always continuous unless the ureter becomes blocked. Even with large quantities of pus the urine in the early stages is generally acid. Examination for the tubercle bacillus should never be omitted and must be most carefully carried out, but no reliance can be placed upon its absence. I have frequently been disappointed in searching for it even in marked cases of tuberculosis of the bladder and other parts of the tract. Blood is only to be found at intervals and seldom in large amount. It is, especially in the earlier periods, a matter of the utmost difficulty to differentiate between the pyelitis of tubercle and that of calculus, but in the latter the inflammation of the pelvis does not spread to the ureter or bladder and there is therefore no dysuria such as forms a very distressing symptom in the later stages of the former. Whenever, then, these early stages have been observed the constitutional symptoms must be carefully watched for, the evening pyrexia, the night sweats, pallor and emaciation, which ordinarily accompany the invasion of tubercle in other parts. Even if catheterisation of the ureters were possible in the case of children the plan is not advisable for fear of spreading disease in the healthy ureter and the use of the endoscope is prohibited except in a few cases so that there is no aid from such sources for detecting whether pus comes from one or both ureters.

If then from such evidences there arises a strong suspicion that one kidney is affected by scrofulous disease the question has to be decided whether surgical interference is justified. Speaking of the disease generally Dr. Dickinson states that both kidneys are affected as often as one alone and only one case in seven occurs in which the disease does not affect other organs. Aldibert has collected thirteen cases of children in which nephrectomy was performed. Of these nine recovered and four died, two of the deaths not being traceable to the operation or to the original disease. No recurrence had taken place in one at the end of eight years and none in another after three. Professor Gross's tables give twenty instances of removal of the kidney at all ages for scrofulous disease, twelve recovered and eight or 40 per cent. died. Tubercle was limited to one kidney in only 65 per cent. In eight cases of preliminary nephrotomy relief was not afforded, so that this proceeding is not recommended.

Mr. Morris on the contrary recommends that nephrotomy should first be tried in cases that are not advanced in the hope that it may check progress by opening and draining the abscess cavity. Nephrectomy may be performed later if strength improves or if lardaceous disease threatens. He adds: "It is in the scrofulous kidney especially that we so much need the means of ascertaining the working capacity of the other kidney and it is in these cases also that the difficulty of doing so is almost insuperable." Professor Gross, from this point of view, recommends the operation in an early stage by means of a ventral incision by which both kidneys can be examined, and of which he states the mortality to be 14·28 per cent. against 53·84 per cent by the lumbar method. Mr. Newman's tables published in 1888 record two cases of nephrotomy for this condition in childhood, both of which ultimately recovered, though one (that of Mr. Morrant Baker) subsequently had the kidney successfully removed, and five cases of nephrectomy, four of which recovered. To these may be added a case by Mr. Wright in which at intervals nephrotomy, cystotomy, and nephrectomy were performed, the child dying with much ulceration of the bladder, and a case by Mr. Eve where in a child, aged three years and nine months, nephrotomy was first performed and seventeen days later the kidney was removed through a prolonged incision. The child recovered and was in perfect health seven months later.

In the light of these results it would seem that where the abscess is large, nephrotomy and drainage should first be tried and later nephrectomy, but where suspicion of an early state of disease is tolerably certain the two kidneys should be examined by means of a ventral incision and if one be found healthy and the other extensively diseased the one affected should be at once removed.

A CASE OF "WORD" WITHOUT "LETTER" BLINDNESS.[1]

BY JAMES HINSHELWOOD, M.A., M.D., F.F.P.S. GLASG.,

SURGEON TO THE GLASGOW EYE INFIRMARY; DISPENSARY PHYSICIAN TO THE WESTERN INFIRMARY; AND ASSISTANT TO THE PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF GLASGOW.

IN former papers of mine "word-blindness" was defined as "a condition in which with normal vision and therefore seeing the letters and words distinctly an individual is no longer able to interpret written or printed language." It was there pointed out that there are different forms which ought to be clearly distinguished from one another. In my first paper[2] a case of "letter-blindness" of singular purity was recorded, the patient having completely lost the power of recognising all the written and printed characters with which he was previously familiar with the exception of Arabic numerals. In a second paper[3] a peculiar disorder was described in which the patient's power of interpreting written and printed language was rapidly exhausted and to which the name "dyslexia" has been given by Berlin. I have recently met with a third variety of "word-blindness," where the patient, still able to recognise the individual letters of the alphabet, is yet wholly unable to recognise or interpret the words composed of combinations of these letters. As an excellent example of this distinct variety of "word-blindness" the following case is, I think, worthy of careful record and consideration.

CASE 1.—A man, aged fifty-three years, on Sept. 7th, 1897, came home from his business about 2 o'clock in the afternoon saying that he did not feel well and had to give up work in the morning as he could not see to read or write. Shortly thereafter, whilst sitting on a chair, he became giddy, fell to the ground, and was unconscious, but only for a moment. He soon felt all right again and in the afternoon went out for a walk. In the evening about seven o'clock without warning he had a severe "epileptiform" fit with general convulsive movements and complete unconsciousness for about an hour thereafter. He remained in a dazed condition for about two days, but gradually recovered and since then had been able to go about. On the advice of his medical adviser he had kept away from business. Even since the fit he had been unable to read and his medical attendant, Dr. Charles Whish, of Pollokshaws, brought him to me on Oct. 11th, 1897, to ascertain the precise nature of the visual defect which prevented him from reading. On examining him with the ophthalmoscope the only abnormal appearances to be found in his eyes were slight radiate lenticular opacities. These, however, were slight and situated at the periphery of the lens, so that they could not interfere to any great extent with the visual acuity. On testing him with the distance types composed of separate letters he could read the letters quite fluently, although his visual acuity was not quite up to the normal, being $\frac{6}{9}$. On testing him with the reading test types composed of words and sentences I found he could not read when made to rely upon vision alone. If allowed to spell out aloud each word letter by letter he could read the words slowly

[1] A paper read at a meeting of the Glasgow Medico-Chirurgical Society on Jan. 14th, 1898.

[2] THE LANCET, Dec. 21st, 1895.

[3] THE LANCET, Nov. 21st, 1896.

and laboriously, just as a child spells them out when learning to read. When prevented from doing this he could not read words at all. The only exceptions were in the case of a few short familiar words such as "the," "of," "to," &c. These he sometimes picked out with a certain amount of pride. On asking him not to attempt any longer to read the words but to read the letters only he read them off fluently line after line. His difficulties in reading words were precisely the same with the largest as with the smallest test types. On the other hand, he read the letters of the smallest test types, Jaeger No. 1, without difficulty with suitable glasses. He had precisely the same difficulty in reading written as in reading printed words. On testing him with figures he could read them rapidly and fluently, not only the individual figures, but when combined into complicated groups of thousands, hundreds of thousands and millions, and even in the form of very complex fractions. He could write to dictation and copy correctly although he could not read what he had written. The visual fields for white and colours were normal. I conversed with him on three different occasions for about an hour each time and there was not the slightest evidence of verbal aphasia or amnesia or of any speech difficulty whatever. His wife, however, informed me that since the fit he had occasionally forgotten the names of old friends and customers. He had also shown a disinclination to exert himself mentally, being disinclined to talk much even with his intimate friends. He was a man of the most regular habits, but before his fit he had considerable mental worry. His vessels were atheromatous. On the most careful examination no other symptoms were discoverable. The patient was seen by me on three different occasions. On the day preceding my last interview with the patient there was a history of a transient attack of tingling and paresis of the right arm during a meal, so that he had for a short time to use his left instead of his right hand. This rapidly passed off and when seen on the following day there was no trace of it. I gave it as my opinion that the inability to read was not due to any ocular defect but to a lesion in the visual word-memory centre situated in the angular and supra-marginal gyri on the left side of the brain and supplied by a branch of the Sylvian artery, that the lesion was a small hæmorrhage or more probably thrombosis occluding that branch of the Sylvian artery supplying the centre. Whether the lesion would remain stationary or extend it was impossible to say. The patient was strongly urged to abstain entirely from business so as to secure absolute cerebral rest and iodide of potassium was recommended on the ground that there might be some specific affection of the cerebral vessels, although there was no history or traces of past specific disease.

For the after-history of the patient, which will be given very briefly, I am indebted to the kindness and courtesy of his medical attendant. About a week after consulting me slight paresis of the right arm and leg and slight paraphasia began to manifest themselves. These symptoms rapidly developed and within another week there was considerable aphasia and well-marked right-sided paralysis, the face being now involved as well as the arm and leg. He complained greatly of pain on the left side of the head. When the aphasia was complete he was given block letters in order to see if he could not express his wants by means of these. He gave them to understand by signs that he recognised the letters, but could not combine them into words. The aphasia and right-sided paralysis became complete before his death, which occurred on Dec. 8th, 1897, about nine weeks after I saw him. There was no post-mortem examination.

The feature of the case to which I wish to draw special attention is the inability to read, which when I saw the patient was the only symptom present, but which enabled us to give a positive diagnosis that he was suffering from organic disease of a special area of the brain. The diagnosis of the true nature of the patient's inability to read was not difficult. In the ordinary routine he was first examined with the distance test types composed of individual letters and these he read without difficulty, showing that visual acuity for distance was nearly normal. When he was given the test types for near vision composed of words and sentences he was unable to read them. This inability to read was altogether independent of the size of the types, being the same with the largest as the smallest. For a moment this was somewhat puzzling. His ability to read the distance types composed of individual letters suggested the request that he should no longer attempt to read the words but simply to name each letter successively. This he did with fluency, running through line after line of the test types, beginning with the very smallest, Jaeger No. 1. It was then clearly evident that the inability to read printed or written words was not due to any ocular defect, but was a cerebral disorder of vision. This defect forms a very interesting contrast to the first case reported by me, where the patient, having completely lost the power of recognising printed and written characters, was in the position of a child who has not yet learned the letters of the alphabet. The present patient, recognising the individual letters, but not being able to combine these into words, was in the position of a child who has learned the letters of the alphabet, but has made no further progress. His inability was with words alone and hence the case has been described as "word" without "letter" blindness. The patient was able to read if he was allowed to spell out aloud each word letter by letter. The explanation of this is simple. He could recognise by sight only the individual letters, but by spelling them out aloud he appealed to his auditory word memory in the temporo-sphenoidal lobe, which enabled him to combine them into the corresponding word. An analogous condition was presented by my letter-blind patient, who, unable by sight to recognise a single letter, could frequently do so if allowed to trace it out with his finger on the table. He was thus able to recognise the letter by reviving the graphic-motor images of the letters, which are probably stored in a special centre in the neighbourhood of Broca's convolution.

In many of the recorded cases of word-blindness the precise nature of the defect is not stated, the reporter contenting himself with the statement that the patient was unable to read. In others the inability to read is complicated with word-deafness, motor-aphasia, or verbal amnesia, and from the proximity of all the cerebral centres concerned in the expression or interpretation of language it is easily understood how these complications occur so frequently. In such cases the problem is obscured by the simultaneous involvement of a number of cerebral centres, so that the precise significance of the ability to read is not clearly seen. This peculiar form of word-blindness, however, does occur altogether apart from any other defects. In the present case the patient when seen by me presented on the most careful examination no other symptoms of any interference with his powers of expression or interpretation of language. On looking over the recorded cases of this variety of word-blindness I have met with two cases of singular purity which will be briefly quoted as affording further typical and uncomplicated examples of word-without letter-blindness. Swan Burnett, of Washington,[4] records the following case in a very graphic manner and with considerable detail.

CASE 2.—The patient was a clergyman, eighty-two years of age. Three weeks before he was seen by Burnett the patient had an attack of giddiness followed by three general "epileptiform" seizures within two days. During the intervals of these attacks he remained in a condition of stupor, but at the end of the third day became fully conscious and felt quite well with the exception of weakness. He found, however, that he could no longer read and therefore consulted Swan Burnett. On examination it was found that there was no ocular defect. It was also found that whilst he could read all the individual letters with ease he was wholly unable by means of visual impressions alone to interpret written or printed words. Numerals were read correctly and with ease. Burnett observed that he read at once the amount of a cheque but could not tell to whom it was drawn or by whom. He could write either spontaneously or to dictation but was unable to read what he had written. His mental faculties generally and memory in other respects were unimpaired. There were no other difficulties in the expression or interpretation of language. All other retinal impressions were correctly interpreted. The patient died from an attack of pneumonia about a year after he was seen by Burnett. In the interval no essential change had taken place in his condition. His general mental faculties and bodily health remained good until his fatal attack of pneumonia. His reading faculty, however, was never regained. There was no post-mortem examination. Burnett remarks: "This case seems to be one of alexia pure and simple. No other faculty, so far as the closest scrutiny and the most careful examination could determine, was affected except

[4] Knapp's Archives of Ophthalmology, New York, 1890, vol. xix., p. 46.

that of reading. This fact would seem to demonstrate quite conclusively the existence of a 'reading centre' separate and distinct from any and all other centres."

Mierzejewski[5] communicated in 1890, at the September meeting of the St. Petersburg Psychiatric Society the following case of word-blindness.

CASE 3.—A physician, aged fifty-six years, of delicate constitution, infected with syphilis in his youth, suffered for a long time from chronic nephritis. In January œdema appeared and he had an uræmic comatose attack which lasted four or five days. Two similar attacks, but of shorter duration, appeared thereafter. Some time after the third attack the patient observed that he had lost the power of reading, although he could easily recognise the letters. Mierzejewski on examination found that he could easily recognise every individual letter but could not unite these into syllables or words. He wrote to dictation fluently and correctly, but could not read what he had written. He wrote prescriptions correctly but could not read them again. He copied writing without mistakes, although he did not understand the meaning of the words he copied. He recognised and read figures even when they were combined in a complicated fashion. His visual acuity was normal and there were no abnormal appearances in the eye. There were no disturbances of speech whatever and his general intelligence was unaffected. No sensory or motor disturbances or any abnormality of the reflexes could be discovered.

Mierzejewski claimed after a perusal of the literature of word-blindness that his case was unique and that no case of word-blindness had been previously described in which the patient's power of recognising individual letters was preserved intact. He proposed to call this new form of word-blindness "cæcitas syllabaris et verbalis sed non litteralis." This form had been described, however, fourteen years before Mierzejewski's paper. Schweigger[6] in 1876 recorded the following case.

CASE 4.—A man, aged seventy-four years, had a slight apoplectic attack with loss of consciousness and clonic spasms in the right arm but no paralysis. Shortly thereafter the patient lost the power of reading. Schweigger found he could recognise the individual letters but could not read the words composed of these letters. He read numbers with greater success but here also he made occasional mistakes. There were no speech disturbances. Fundus appearances were normal. There was right homonymous hemianopsia. A few days after Schweigger's interview the patient succumbed to a fresh apoplectic attack. There was no post-mortem examination. Schweigger remarks that he had previously seen a precisely similar defect in another patient.

These cases, then, afford typical examples of a special form of word-blindness which may sometimes appear as an isolated cerebral symptom uncomplicated by any other disorder in the expression or interpretation of language. On analysing their salient features it will be found that all present a striking agreement: (1) they could read fluently the individual letters, printed and written, but could not interpret words composed of these letters; (2) they could read figures both individually and when combined in the most complex manner; and (3) they could write spontaneously and to dictation, but could not interpret the words which they themselves had written, although they could read the individual letters. How are these symptoms to be explained? This question will be answered most clearly by discussing in succession each of these groups of symptoms. In my first paper on word-blindness[7] it was pointed out that clinical observation and pathology prove the existence of two higher visual centres in the cortex of the brain, having distinct but closely allied functions. There is in the occipital lobe, especially in the neighbourhood of the cuneus and calcarine fissure, the centre for primary visual impressions, the perceptive centre, the function of which is to bring into the sphere of consciousness a mental picture of the retinal impressions and through which we become conscious of objects as occupying certain positions in the visual field. Lesions of this centre are shown by defects in the visual fields. But there is in the angular convolution and its neighbourhood another centre, where these sensory impressions are received, retained, and accumulated, the visual memory centre. The intelligent recognition of any object can only be accomplished by a comparison of the retinal impressions in the percipient centre with the visual memories of past impressions stored in the visual memory centre. Lesions of this centre are therefore evidenced by mind-blindness in its various forms, that is the individual though seeing the object distinctly is no longer able to recognise it, having no visual memory or image with which to compare it. In my other papers the different varieties of mind-blindness were discussed and it was shown that word-blindness is simply a special form of mind-blindness. In right-handed people the visual memories of letters, words and figures seem to be stored in the left visual memory centre only. The lesions of this left centre are evidenced by disturbances affecting only these highly specialised visual memories or images, leaving in most cases quite unaffected the more general visual memories of form and colour, objects and places. The inability to read in the cases under consideration can only be intelligently explained by a lesion affecting this visual memory centre for words and letters. We are apt to forget that the power to read rapidly at sight has been acquired only by long and laborious effort. The complex cerebral processes involved in reading by prolonged practice are carried on with such ease and rapidity as to be removed from the sphere of consciousness and transferred to the mysterious region of unconscious cerebration. When disease disturbs the perfect adjustment of the elaborate cerebral mechanism we may sometimes get a glimpse of the complex processes which are constantly at work in the great laboratory of the brain.

Let us analyse a little more precisely the cerebral visual processes concerned in the act of reading. A clearer conception of the processes involved will only be attained if we consider the manner in which an individual learns to read. The first stage is to store up in the visual memory the individual letters of the alphabet and to learn to associate these with their particular speech equivalent. When this has been attained there is no difficulty in attaching to any letter its particular speech equivalent as we have now stored in our memory centre a visual image of each letter which serves as a constant standard of comparison and recognition. This power is acquired with comparative rapidity, there being only twenty-six letters in our alphabet, or taking capital and small letters fifty-two visual images in all to be acquired. The next stage is to learn to interpret by sight words made up of different combinations of these letters and to associate them with their corresponding speech equivalents. This can only be accomplished by gradually storing up in the visual memory centre the visual images of the different words. This is a more formidable task and requires for its accomplishment a prolonged period of time. At first the child reads by spelling out each word aloud letter by letter, and thus by appealing to his auditory memory gets the proper word; or he may simply be seen to move his lips, spelling silently each letter and thus appealing to his memory of speech movements or glosso-kinæsthetic memory, as it has been called by Bastian. He has not yet acquired the visual images of words and therefore cannot yet interpret written or printed words by sight alone. But by prolonged and persistent practice he gradually comes to interpret printed and written words simply by looking at them, or, to put it in another way, he has now accumulated in the storehouse of his visual memory the visual images of words. When he now looks at a printed or written word he can instantly interpret it by comparison with the word-image in his visual memory without having recourse to his auditory or glosso-kinæsthetic memory. In short, he has now learned to read by sight.

Now if by disease the visual word-centre is completely destroyed or if it is completely cut off from the primary perceptive centres in the occipital lobes, then the patient is both word and letter blind. But if the destruction is only partial and that part of the centre in which are stored the visual memories of letters remains intact, then the patient, though still able to recognise the individual letters by sight, will no longer be able to recognise and interpret words because he has lost the visual memories of words which he had acquired by years of laborious effort. He will be, so far as vision is concerned, in the same position as a child who has only mastered the letters of the alphabet but has not yet attempted to read words. He will be able to read only by spelling out aloud each letter of the word and thus appealing to his auditory memory. This was precisely the condition of the patients in the cases under consideration and this view of the condition renders intelligible the phenomena observed

[5] Neurologisches Centralblatt, Berlin, December, 1890, No. 24, p. 750.
[6] Graefe's Archiv für Ophthalmologie, Berlin, 1876, vol. xxii., Abtheilung 3, p. 297.
[7] Loc. cit.

This idea of the grouping together of definite classes of visual images within the visual word-memory centre may at the first glance seem somewhat fantastic, but certainly the study of clinical facts points strongly to this conclusion. How else is the fact to be explained that all the patients referred to could read figures fluently not only individually but when combined in the most complicated fashion? In my first paper a strong body of evidence was brought forward to prove the complete functional independence of the visual memories of letters and figures, for it was clearly shown by clinical facts that the visual memory for letters may be entirely lost whilst that for figures is preserved intact. The case at present under consideration with the others quoted affords further proofs. How can such complete functional independence be explained unless on the ground of anatomical independence? The visual memories of figures must be preserved in a different area of the cerebral cortex from the visual memories of words and letters. Both classes of visual memories, however, are lost simultaneously with such frequency as to make it highly probable that they are deposited in adjacent areas of the cerebral cortex. Similarly, since clinical facts clearly show that the visual memories of words may be entirely lost whilst the visual memories of letters remain intact we are driven to the conclusion that these are deposited in different areas of the cerebral cortex, but from the great frequency with which both are simultaneously lost it is evident that these areas are adjacent.

This view of the complexity of the visual word-centre and of the arrangement within its area of distinct groups of visual images not only explains such cases as we have been considering but renders intelligible those peculiar cases recorded from time to time which, according to this view, would be regarded as cases of partial destruction of the centre. As examples of the curious partial forms of word-blindness sometimes observed the following are interesting. Bruns and Stolting[8] have recorded a case in which the patient's inability to read printed letters and words was complete, but only incomplete for written characters and for figures. Berkham[9] had a case in which the patient was word-blind but not completely letter-blind, being able to recognise some letters. Weissenburgh[10] had a case in which the patient was word-blind with the exception of a few words. Michel[11] quotes a case where the patient could read the Gothic but not the Latin characters. Charcot[12] had a case where the patient knowing French, German, Spanish, Latin, and Greek lost the visual memory of a few of the Greek and German characters only. In Burnett's case, in Mierzejewski's, and in my own the patients could write spontaneously to dictation and copy although they could not read the words they had written. In their recent investigations Dejerne and Serieux[13] have shown that when the visual word-centre is destroyed the patient can neither read nor write. He is agraphic because he can no longer call up in his mind the visual memories of letters which are necessary to stimulate the graphic motor centre. In these three cases there was only partial destruction of the visual word-centre, and the visual memory of letters was still preserved intact. Hence these patients could all write. I observed in my patient, however, that he wrote very slowly and spelt out each word as he wrote it. He could revive only the visual image of each letter and not the visual image of the whole word. Hence his slowness in writing and his necessity for spelling it out letter by letter.

With regard to the position of the visual word-centre, this has been discussed in a previous paper.[14] It was there stated that although its boundaries have not been finally laid down, still a constantly increasing pathological experience tends to prove that the centre in which are stored the visual memories of letters and words includes the supra-marginal and angular convolutions both of which belong to the inferior part of the parietal lobe. The visual word-centre like the speech-centre is unilateral and in right-handed people is situated on the left side of the brain. This view is confirmed by a valuable collection of cases at the end of an article by Starr on the pathology of sensory aphasia.[15] In twenty cases where the patients were completely unable to read, the angular or supra-marginal gyri were found to be affected in fifteen and in the others the lesions were in the neighbourhood of this area and therefore isolated the centre.

There can be little doubt that this was the situation of the lesion causing the inability to read in the case which form the subject of this paper. The history of the case is one o gradually extending thrombosis of the left Sylvian artery with consequent softening of the brain, and this was the opinion of the consulting physician who saw the patient after the appearance of the right hemiplegia and aphasia. The branch of the Sylvian artery supplying the visual word-centre is distinct from that supplying Broca's convolution and the motor areas for face, arm, and leg. At the outset there probably was a partial blocking of the main trunk of the left Sylvian artery, and hence the preliminary symptoms. But the thrombosis had first blocked completely that branch of the artery supplying the angular gyrus and its neighbourhood, and hence the purity of the symptoms when the case was seen by me. Shortly afterwards the thrombosis extended to the branches of the vessel supplying Broca's convolution and the motor areas, and hence the aphasia and right hemiplegia. If part of this visual word-centre received its blood from a different source that part would escape destruction and this is probably what has happened in the case under consideration. Nor is this supposition improbable, as the posterior cerebral artery supplies a large part of the cortical area of the occipital and temporo-sphenoidal lobes which are in the immediate neighbourhood of the word-centre. It will be observed that in Burnett's case, in Mierzejewski's, and in my own case the visual fields were normal. This is strongly in favour of the lesion being a cortical one. In subcortical lesions where the word-centre is simply cut off from the percipient centres in the occipital lobes, the word-blindness is nearly always accompanied by right homonymous hemianopsia. This is due to the fact that a subcortical lesion in the white matter of the left occipital lobe, so situated as to cut across the fibres passing from both occipital lobes to the left angular gyrus, must also involve the optic radiations passing to the left occipital cortex, and the patient will then be not only letter-blind but also exhibit right homonymous hemianopsia. This is clearly exemplified and fully discussed in my first case,[16] where the patient was completely letter-blind and had right homonymous hemianopsia. The complete absence in the present case of any defect in the visual fields is thus in favour of the lesion being a cortical one, an affection of the centre itself, as I have regarded it.

Although there was no post-mortem examination in the present case I think the careful analysis of the visual symptoms is of considerable clinical value. When first seen by me the cerebral disorder of vision was the only cerebral symptom present, and it is from a study of these pure cases that we can hope to attain a more precise view of the nature of the different disorders embraced in the term "word-blindness." Pathology can teach us little apart from careful, thorough, and correct clinical observation. In a large proportion of the hitherto recorded cases of word-blindness with pathological examination the nature of the visual defect is recorded so vaguely that the pathological examination loses much of its value. An increased and more widely diffused knowledge of the nature and varieties of the cerebral disorders of vision would lead to a more precise, rigorous, and comprehensive examination of the symptoms during life, and consequently would give any subsequent pathological examination a greatly increased value.

Glasgow.

[8] Neurologisches Centralblatt, Berlin, Sept. 15th, 1889.
[9] Archiv für Psychiatrie und Nervenkrankheiten, Berlin, vol. xxiii.
[10] Archives de Neurologie, Paris, July, 1894.
[11] Berger: Les Maladies des Yeux dans leurs rapports avec la Pathologie générale, Paris, 1892.
[12] Clinical Lectures in Diseases of the Nervous System, vol. iii., New Sydenham Society's Series.
[13] Comptes-Rendus des Séances de la Société de Biologie, Paris, 1891-92.
[14] THE LANCET, Dec. 21st, 1895.
[15] Brain, vol. xii., London, 1890.
[16] THE LANCET, Dec. 21st, 1895.

HEALTH OF BRISTOL.—Dr. D. S. Davies, the medical officer of health, reports that in 1897 the birth-rate in the city of Bristol was at the rate of 27·7 per 1000 living as against 27·6 in 1896. The death-rate was 17·2 as compared with 16·9 in 1896. 959 infants died under one year of age and were in the proportion of 149 per 1000 births registered as against 142 per 1000 during 1896. The zymotic death-rate was 1·8 per 1000; the deaths referred to these diseases numbered 425, including 1 from small-pox, 57 from measles, 18 from scarlet fever, 35 from diphtheria, 116 from whooping-cough, 47 from "fever," and 151 from diarrhœa.

SOME REMARKS ON RECTAL SURGERY.[1]

BY THOMAS BRYANT, M.CH. R.U.I.,
F.R.C.S. ENG. & IREL.,
CONSULTING SURGEON TO GUY'S HOSPITAL; SURGEON EXTRAORDINARY TO HER MAJESTY THE QUEEN.

(*Continued from p. 388.*)

PERFORATING ULCERS OF THE RECTUM.

THAT a simple ulcer may start in the rectum and perforate its walls and so give rise to a fæcal ischio-rectal abscess is a well-recognised fact, but I am not so sure that the profession as a body recognise the occurrence of a simple ulcer of the rectum perforating its walls at some higher or lower level and giving rise to fæcal extravasation with as a result septic cellulitis of the perineum, abdominal parietes, gluteal region, and scrotum in the male and external genital organs of the female. I should like also to add to those possibilities a perforation of the bladder in the male and of the vagina in the female subject. I have seen and had under my care examples of all these conditions and have a few rough notes of some of them to which I wish to draw attention.

CASE 1.—The first case of the kind I saw was in 1858 when acting as surgical registrar to Guy's Hospital and the patient was one under the care of the late Mr. Hilton. The man, aged sixty years, was admitted into the hospital in May, 1858, with œdema and inflammatory infiltration of the perineum, scrotum, and abdominal parietes as high as the thorax and all these parts were emphysematous. This condition had commenced in the perineum and scrotum two days previously without any known cause. He had not had any difficulty in micturition and his urine was clear and urethra healthy, nor so far as he knew was there any bowel trouble. Free incisions were made in every quarter that was involved, when fæcal air escaped and fæcal fluid was washed away. Rapid failure of power, however, set in and the man died on the fifth day. A necropsy revealed that the urinary passages and organs were healthy and intact, but an ulcer was found in the anterior wall of the rectum half an inch above the anus which had perforated its walls and allowed the contents of the bowel to escape into the cellular tissue of the perineum and give rise to the condition described.

CASE 2.—In 1875 I was called to see a married woman, aged about forty-five years, who when in apparent good health was suddenly seized with pain of a burning nature in her perineum which was rapidly followed by swelling of the external genital organs and within twenty-four hours of the right gluteal region. I saw her on the second day and found all those parts swollen and emphysematous and she was in a high state of fever. Free incisions into these swollen tissues gave vent to fœtid fæcal air and dead tissue and on making a rectal examination a large opening was found in the rectum on its right and anterior wall. By free irrigation of the tissues, the use of antiseptic lotions in the form of iodine water, and the removal of sloughs a good recovery was brought about.

CASE 3.—In October, 1875, I was asked to see a married woman, aged thirty years, who was pregnant four months, for a sudden swelling of the external genitals and vagina, of the right thigh and lower part of the abdomen as high as the umbilicus. It had existed about twenty-four hours and had come on when she appeared to be in good health. I found all these parts inflamed and swollen and of a dusky hue, also crepitating to the touch, and the patient was very ill. By free incisions however into all these œdematous and emphysematous tissues and the free use of iodine water by irrigation and constitutional treatment a convalescence was brought about and she subsequently gave birth to a healthy child. In her case I found high up in the rectum a perforating ulcer which had made its way into the sacral cavity and hence the trouble.

CASE 4.—In 1874 a man, aged fifty-three years, was admitted into Guy's Hospital under my care who for three years had been passing flatus and later fæces with his urine and for some months flatus and fæces without urine through his urethra. Some urine at the same time used to pass per anum. A rectal examination revealed an ulcer on its anterior wall at the base of the prostate and as this was supposed to be sufficient to explain his symptoms I made a perineal incision and laid the bladder open into the rectum as in the old operation of recto-vesical lithotomy. This measure gave relief, but the patient gradually sank from kidney disease and some localised pelvic peritonitis. At the necropsy a simple ulcer of the rectum was found which had opened through the prostate into the base of the bladder and which had been attacked by the operation; but one inch behind this and to the left of the median line was a second ulcer in the rectum of the same simple character which had perforated its walls and so on to and through the bladder. The local peritonitis was caused by this latter ulcer. There was no sign of new growth in either the rectum or bladder The kidneys were much diseased.

The case above briefly quoted is an example of what I am convinced is by no means a rare condition and to which I drew attention in 1872 when I read before the Clinical Society of London the notes of two cases of recto-vesical fistula due to simple rectal ulceration treated successfully by left lumbar colotomy. One of these cases was in a man, aged sixty-four years when he underwent the operation, and who lived in comfort for six years after it and died from a ruptured heart at the age of seventy years. After death evidence of cicatricial repair of old ulceration was present in the rectum, with a very small fistulous opening between the bladder and rectum, which was still patent and through which a very little urine during life had passed at times into the rectum, but this had never been a source of trouble. The second case was of a man, aged forty-nine years, who had been passing fæces and flatus with his urine for three and a half years before I operated in 1870 and who made a good recovery. One year after operation he wrote: "No wind or fæces have passed into the bladder since the operation, although a little urine still passes into the rectum." In 1884 he wrote: "The operation has been quite successful as it has added fourteen years to my life. I am quite free from pain and I feel as strong as if nothing was the matter with me. The contents of the bowel all pass through the opening in the loin; nothing passes into the lower bowel except a little water from the bladder." Since these cases occurred I have had others to support the view they illustrate; for example, in 1882 I had a patient, aged sixty-five years, who died from pleurisy and œdema of the lung who twelve years before had passed flatus with his urine without any known cause or any other symptom. This he continued to do for some months when he got well. At the post-mortem examination the evidence of old ulceration of the rectum and of the former recto-vesical fistula was very clear, and there was a complete absence of any local organic disease.

These cases are full of interest and entirely support the observations I made in 1872, when I reported the two cases of colotomy for recto-vesical fistula, "that ulcerated openings sometimes take place between the bladder and either the large or small intestines, many of which have no connexion with stricture of the bowel and even less with cancer."

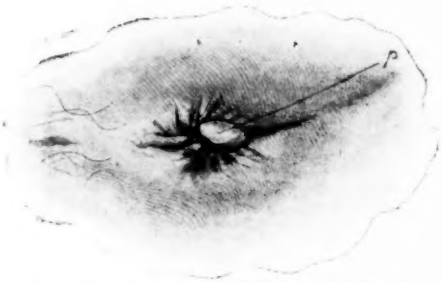
ON FISSURE OR PAINFUL ULCER OF THE ANUS.

It might have been thought since the symptoms of this affection are so characteristic that either a mistake in its diagnosis or a chance of its being overlooked were most improbable events, and yet it is true that from some cause or other such cases are too often passed over and allowed to drift. They are either regarded as piles by the patient and so treated on the patient's diagnosis by the practitioner, or the diagnosis is supposed to be confirmed if, after a superficial external examination, anything like a prolapsed internal or a swollen external pile is seen, or even a small prolapse of the mucous membrane of the bowel, or possibly a papilla-like fold of anal integument situated at either the dorsal or perineal extremity of the anus which is mistaken for a pile. Whereas to detect an ulcer a more careful examination of the part is absolutely essential, together with a greater appreciation of the value of the papilla-like fold of anal integument as a guide to an ulcer, for this fold of anal skin or papilla is one of the most constant and valuable indications of this kind of ulcer, whether associated or not with hæmorrhoidal trouble. To determine the fact of the existence of this ulcer no painful examination is either necessary or justifiable, for a painless external examination if rightly made can at once determine the question. In the drawings which are here copied from my lost friend's original the method is well seen and needs no lengthy description (Figs. 4, 4A, 5, and 5A). With the patient on his side and the thighs well flexed the buttocks are

[1] A paper read before the Medical Society of London, Jan. 24th, 1898.

separated and the surgeon with the thumb and index finger of one hand laterally draws aside the two sides of the anus and with the finger or thumb of the other hand raises or pulls down the characteristic fold of skin or papilla beneath which the presence of an ulcer is suspected, when if it be present the extremity of the ulcer or the whole ulcer will at once be seen, even if the ulcer exists alone, or is

FIG. 4.



Fissure of the anus as seen without the speculum, the characteristic papilla (P) concealing anal ulcer.

FIG. 4 A.

A fissure (*f*) exposed without the use of the speculum.

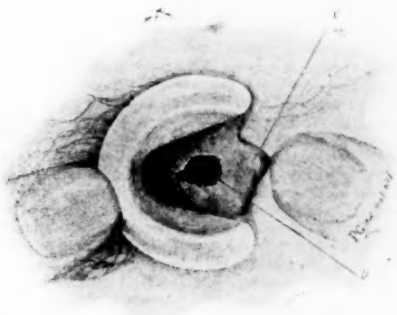
found to coexist with external or internal piles or even with a polypus, for it cannot be too well recognised that cases of piles, prolapse of the rectum and polypi when the seat of severe pain are mostly so from their being complicated with the painful ulcer; indeed, it is often owing to the grafting of this acute trouble upon an old one that the patient is

FIG. 5.

Anal ulcer as seen with the speculum. P marks the papilla covering the ulcer.

induced to seek professional advice for his chronic affection. Should the ulcer be associated with piles or rectal prolapse the patient will often tell you that since he has had the severe local pains neither the piles nor prolapsed bowel have come down so much as they did formerly and that he has been able, therefore, to sit down with greater comfort, having been led by these apparent improvements to think that his piles or prolapse had taken a favourable turn; whereas the intelligent surgeon should in this report of his patient be led to a different conclusion and find an explanation of the facts which he may accept from his patient that the protrusion of the rectal trouble has lessened because the anus has become less patulous from the spasmodic contraction of its sphincter muscle which is always associated with

FIG. 5 A.



Anal ulcer as seen with the speculum. The papilla (P) has been drawn aside to expose the ulcer (U).

this anal ulcer and as a consequence lessens or forbids the prolapse which formerly occurred. Indeed, whenever a patient complains of sudden accession of anal pain in the act of defecation, and the persistence of a burning, cutting pain for a few or many minutes, or even for hours after the act; whenever a patient who has been known to have piles or prolapse suddenly becomes the victim of this intense local pain and, as a consequence, seeks for relief, the presence of this trouble should be suspected and no treatment ought to be suggested before such a careful local examination as I have described has been carried out. When this trouble

FIG. 6.

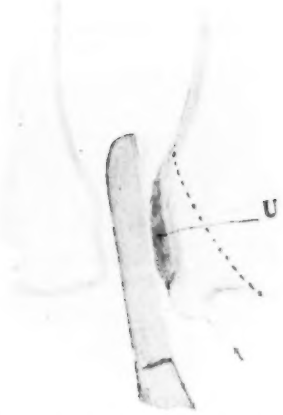
A typical anal ulcer as displayed by the speculum.

is grafted on to others and piles, polypus, or prolapsus co-exist the treatment of the recent affection should be included in the treatment of the older trouble and a cure of both should be secured.

In Mr. Gowland's drawings are to be seen many examples of anal ulcer associated with piles, prolapse, and polypus. The patient may refuse an examination with the natural dread of serious pain being excited or increased by the introduction of a finger, for he knows too well what torture the passage of a hard motion causes and that a liquid one is often as bad; but the practitioner can with confidence promise him that no pain shall be caused, for by careful

manipulation such as has been described (Figs. 4, 4A, 5, and 5A) no pain need be or should be occasioned.

FIG. 6A.



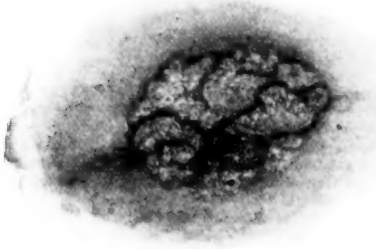
The division of the ulcer. U marks the seat of the ulcer.

FIG. 6B.

P marks the papilla which covered the ulcer in case illustrated by Figs. 6 and 6A.

When the ulcer is once recognised its cure is soon brought about if it be uncomplicated by a forcible dilatation of the anus followed by a well-made incision through the whole length of the centre of the ulcer together with half an inch

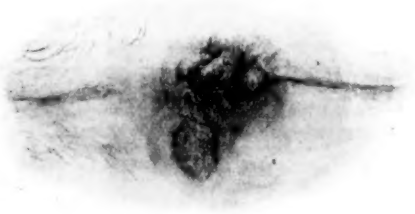
FIG. 7



A typical anal wart.

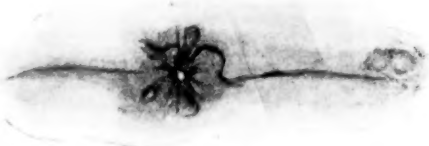
of the healthy tissue above and below its border (Figs. 6 and 6A), the incision being made to penetrate only through some of the superficial fibres of the sphincter muscle, wherens in slighter cases the forcible dilatation of the sphincter will suffice by itself. If the ulcer has been of long standing a deeper incision may be necessary than when it is

FIG. 8.



Typical anal condylomata. The patient was a woman aged twenty-one years.

FIG. 8A.



Typical anal condylomata. The patient was a woman aged twenty years.

FIG. 8B.

Typical anal condylomata in a male patient.

of recent origin, but I have never seen an uncomplicated case of anal ulcer in which the division of the whole sphincter of the anus was required. Figs. 7, 8, 8A, 8B, and 9 illustrate other anal ulcers and growths which must be recognised.

FIG. 9

A malignant ulcer of the anus.

Grosvenor-street, W.

A NEW METHOD OF VENTRO-FIXATION, BEING A MODIFICATION OF ALEXANDER'S OPERATION FOR RETROVERSION AND PROLAPSE.

BY C. J. BOND, F.R.C.S. ENG.

IT will, I think, be admitted by all that the operation of ventro-fixation of the uterus as usually practised is accompanied with disadvantages and in some cases ends in failure. First, there is the presence of buried sutures connecting the uterine fundus with the abdominal wall. Secondly, the injurious effects which these sutures and the accompanying adhesions exercise on the normal progress of any subsequent pregnancy. Though these effects may not be so serious as in the case of vaginal fixation, yet trouble has arisen in several recorded cases. Finally, the operation in a certain number of cases fails to cure the disease. The failure seems to be due in some cases to actual elongation of the uterus itself by the forcible drag of vaginal walls and bladder; these are protruded and pull on the lower uterine segment at the point of reflection or attachment and eventually carry this point below the vulva, even though the adhesion of the fundus to the abdominal wall remains unbroken. In one case of my own this occurred and was only cured by hysterectomy. In other cases the adhesions themselves seem either to have stretched or given way, allowing a re-prolapse of the organ as a whole. It would seem therefore desirable that any method which might obviate some of these troubles should be tried.

In the last three cases of complete prolapse in which I have operated I have proceeded as follows. The abdomen is opened in the usual way. The round ligament on one side is then identified as it passes from the fundus to the pelvic brim; the ligament, with its investing fold of peritoneum constituting the free edge of the broad ligament, is pinched up between the finger and thumb at a point a finger's breadth distant from the uterus. The peritoneum is in this way made tight over the ligament. A small incision is made through the peritoneum just over the ligament and the loosely connected fibres of the ligament isolated, and the exposed portion freed and turned out of its investing membrane, by means of the finger and thumb nails, blunt dissector, or hook. When well isolated it can be pulled upon and made tense peripherally, and when thus tightened, it is divided with a snip of the scissors as it stands up covered with peritoneum near the brim of the pelvis or at any spot which gives enough length of tendon to work with. This should not be less than three inches. Now, by sliding back the peritoneum with the finger and thumb of one hand and at the same time making traction on the ligament in a peripheral direction with the other, the ligament can be pulled out of the peritoneum along its entire course up to the point at which it has been divided like a finger out of a glove, leaving it of course still attached to the fundus. The same process is repeated on the other side. It is important in doing this to see that the whole thickness of the ligament is included and liberated in the first instance, in order to avoid drawing out a few only of the frayed-out fibres. It should come out as a whitish cord as thick as a No. 8 or No. 12 catheter, or in some cases larger. If any small vessel be divided in the peritoneum either in the first incision or in the cut with the scissors, pressure with a Wells forceps for a few minutes will be sufficient.

We have now the uterine fundus with the two ligaments or animal ligatures attached, and it remains to describe the way in which they may be used to fasten the uterus in its new position. Up to the present I have proceeded as follows. Sliding the skin on one side, I pass a pair of sinus forceps through the whole thickness of the abdominal wall on one side of the incision, not, however, including the peritoneum. The end of the ligament is seized with the forceps and drawn through and the same process repeated on the other side; the uterus is now steadied against the abdominal wall and the sides of the incision approximated. In some cases I have then tied the two ligaments in a knot over the abdominal incision in front beneath the skin; in others I have stitched the ends together or stitched each one down, folded on itself, to the abdominal wall; the rest of the incision is closed in two or more layers and the skin sutured over in the ordinary way. It is important to raise and fasten the fundus to the abdominal wall at a sufficiently high point above the pubes, as I feel sure that in many cases the uterus is fastened too low down and the stretched vaginal walls are not pulled fully up.

The advantages which this method of fixing the uterus offers over those in which sutures are used are, firstly, that all dead ligatures are avoided within the peritoneum; secondly, that no suture is passed into the uterus itself; and, thirdly, that in the case of subsequent pregnancy the suspending round ligaments would by undergoing hypertrophy and lengthening allow the fundus to rise in the abdomen.

As to the permanency of the results. I have inquired into the conditions of three patients, all multiparæ above middle age, and all bad cases, in which pessaries had been tried and failed, operated on eight months, seven months, and four months ago respectively with the following results. In the case of the patient operated on eight months ago she now gets about and can walk two miles in comfort, though there is still some prolapse of the posterior vaginal wall, yet the os can be felt in the standing posture well up behind the pubes. In the second case the patient is travelling about with a barrel organ, but I have not been able to make an examination. In the third case the medical man under whose care the patient is writes that the operation has been a success as regards the prolapse. But it is not only in prolapse that the method of utilising the round ligaments within the abdomen may be practised. In cases of retroflexion which cannot be satisfactorily treated by pessaries—for the class of cases, in fact, in which Alexander's operation would be appropriate—I find that good results can be obtained. The method is as follows. The abdomen is opened in the usual way; this at the onset secures the great advantage, absent in Alexander's method, of finding out exactly the condition of the uterus and its appendages and the presence or absence of adhesions or inflammatory disease. If it be now decided to treat the retroflexion by shortening the round ligaments from within the abdomen we proceed thus: The round ligament is identified and raised in its investing fold of peritoneum on one side at a point between the fundus and the brim of the pelvis, an incision is made over it and the ligament isolated as in the case of the operation for prolapse; then, partly by traction and partly by pushing back the peritoneum, a loop of the ligament is drawn out of sufficient length to cause the necessary amount of forward traction on the uterus; and the loop thus isolated is ligatured at its base with silk, the part of the loop beyond the ligature being cut away and the ligatured portion allowed to drop back within the broad ligament. The same operation is then repeated on the other side. In the case of a young unmarried girl, aged twenty-five years, in whom I performed this operation two months ago I have heard lately that she is now able to carry out the duties of a domestic servant. I was led to try this simple plan of finding and shortening the round ligaments partly because I had myself failed in one instance after careful search to find sufficient of the ligament in the inguinal canal to successfully carry out Alexander's operation and partly because other surgeons have also failed in the same way.

Leicester.

THE BACTERIOLOGICAL DIAGNOSIS OF CERTAIN INFECTIOUS DISEASES IN CONNEXION WITH PUBLIC HEALTH WORK.[1]

BY SHERIDAN DELÉPINE, M.B., B.SC.,
PROCTER PROFESSOR OF PATHOLOGY, OWENS COLLEGE, VICTORIA UNIVERSITY.

(*Continued from p. 348.*)

III. DIPHTHERIA.

So much is already known of the methods in use for the bacteriological diagnosis of diphtheria that I shall simply describe the way in which the work is carried out in my laboratory, and though we cannot claim in Manchester to have been the first to apply this method of diagnosis in public health work we have by careful consideration of the

[1] A paper read at the Conference of Medical Officers of Health at the Sixteenth Congress of the Sanitary Institute, Leeds, on Sept. 15th, 1897

difficulties to be overcome obtained an encouraging measure of success.

The bacteriological diagnosis of diphtheria is based on the fact that the bacillus discovered by Löffler, the bacillus of diphtheria, is present in inflammatory products covering mucous membranes and in inflamed membranes affected with diphtheria. This bacillus is not alone present but is usually accompanied by other organisms, mostly staphylococci and streptococci. If the surface of a solid medium specially suitable for the growth of the diphtheria bacillus, such as ox or horse serum, or better still the mixture of alkaline glucose, bouillon and serum introduced by Löffler, be inoculated with a very thin layer of the inflammatory products and incubated at a temperature of from 35° to 37° C. the bacillus of diphtheria will generally grow more rapidly than, or at any rate as rapidly as, any of the other micro-organisms present, so that if from twelve to twenty hours after inoculation the surface of the inoculated serum be examined it is found to be covered with colonies of various kinds, among which those of the diphtheria bacillus will be present. As some other organism may simulate in mode of growth the diphtheria bacillus all the suspicious colonies are examined microscopically in the usual way—i.e., thin films are prepared, stained with diluted carbol fuchsin, and examined with a $\frac{1}{12}$th oil immersion objective. The bacillus is easily recognised from other organisms by its size, its mode of grouping, its unequal staining, and the tendency which the extremities of some have to swell, giving to the rod a club-shaped appearance. There are a thick, short variety and a long variety of the organism and there are intermediate shapes between the two. If tested by inoculation some of the bacilli, after pure cultivations have been obtained, show great virulence; they are mostly those of the long type, others, generally short, show little virulence. I have found it impracticable to test all the bacilli by inoculation and I have made it a rule to report diphtheria bacilli as present whether the long or the short form was found whenever they were quite typical. Occasionally it is difficult to be absolutely certain about the exact nature of certain short bacilli and in all such cases a doubtful report is issued. The routine followed will best be explained by reading the forms which Dr. Niven issued after we had considered the matter together when the work was started officially in Manchester.

The first circular was to explain to the medical men of the district what had been arranged. This circular will show clearly that the aim in placing bacteriological examination at the disposal of medical men was not to check the diagnosis of cases absolutely clear, but to give facilities for the early or late diagnosis of any case with regard to which the possibility of diphtheria was suspected. From an administrative point of view it is, however, most desirable that all cases should be examined bacteriologically.

Public Health Office, Town Hall, Manchester,
Feb. 3rd, 1896.

DEAR SIR,—At a meeting held on Jan. 29th the Sanitary Committee of this city confirmed a resolution passed by the hospitals sub-committee that facilities be afforded to medical men in the diagnosis of cases of diphtheria. It is matter of common experience that many cases of diphtheria, especially those of a small degree of severity, are difficult to recognise. At the same time if unrecognised they are liable to spread the disease. On the other hand, if such slight cases are reported it is not easy to get the patients to believe that they have suffered from so formidable a disease as diphtheria or to induce them to have the requisite measures of isolation and disinfection carried out. In the same way grave difficulties arise as regards the removal of such cases to hospital.

In order to obviate these difficulties and to assist both the practitioner and the Health Office the Sanitary Committee have arranged with the council of Owens College and Professor Delépine to receive from him a diagnosis of the nature of material obtained from cases suspected to be suffering from diphtheria.

A number of tubes are kept at the Health Office in the town-hall, each containing materials by means of which a practitioner can obtain from a suspected case matter for transmission to the pathological laboratory at Owens College. These tubes are enclosed in a wooden case on the outside of which are printed instructions for taking the matter for examination.

Medical men are requested to be careful to fill in the particulars asked for as no bacteriological examination will be made in the absence of sufficient information.

Should the bacteriological examination show that the case is not one of diphtheria the fee of 2s. 6d. for notification will be paid just as if no bacteriological examination had been made.

On the other hand, if no bacteriological examination is requested, this will be regarded as a proof that the case reported admits of no doubt. Applications for tubes must be made to the Health Office. The tubes may afterwards be forwarded direct to the College. The diagnosis, again, can only be obtained from the Health Office.

It is, however, the aim of the Sanitary Committee to shorten as much as possible the period between the first report of the case and the receipt by the medical attendant of the bacteriological diagnosis.

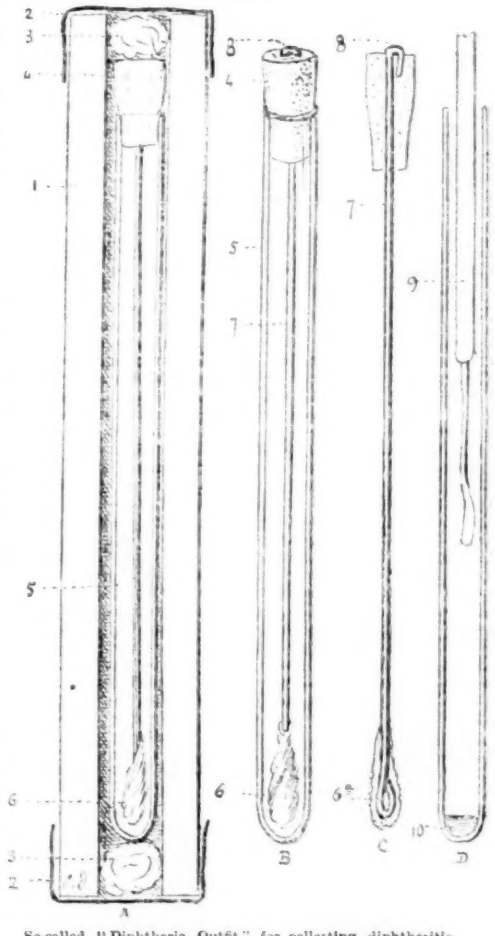
If the medical attendant will telephone to the Health Office from the nearest police-station a request for a tube this will be at once sent by messenger to his residence or to the address of the patient, as the medical attendant may desire. If he is prepared at once to take a specimen for diagnosis the messenger will wait to receive the tube from him charged with the matter to be examined and will convey it forthwith to the College. The diagnosis will be given to the medical attendant only on the following day. It will be necessary, however, that the tube reach the laboratory by 3 P.M.[2] on any one of the days Monday to Friday, and on Saturday by 1 P.M., otherwise the diagnosis will be delayed by one day. No diagnosis will be given on Sunday.

The expense of the bacteriological examination will be defrayed by the Corporation and it is hoped that full advantage will be taken of the opportunities thus afforded.

In order that medical men may familiarise themselves beforehand with the procedure which they will require to adopt a copy of the instructions printed on the outside of the wooden case is enclosed.

JAMES NIVEN, Medical Officer of Health.

FIG. 1.



So-called "Diphtheria Outfit" for collecting diphtheritic products and transmitting them to the Owens College Laboratory. A, Section of case (1); 2, 2, Antiseptic adhesive plaster; 3, 3, Pads of cotton-wool to prevent damage to test-tube (5). B shows position of swab (6) attached to iron wire (7) fixed in cork (4). C, Section of swab and cork showing the ends of the wire (6a and 8). D, Swab-tube for preparation of emulsion; 9, Platinum spatula; 10, Bouillon or peptone water.

[2] The wording of the circular has been slightly altered in a few places. The time limits given in these forms were rendered necessary by the conditions under which a large amount of work had to be done at first as I could only give a limited part of my time to it. With my present staff of assistants such limits are now less necessary. I am not sure, however, that there is very great advantage in receiving tubes at all times of the day unless some arrangement be made to do part of the examinations at night. An interval of at least twelve to seventeen hours must be allowed between inoculation of the tubes and the examination of the colonies.

The tubes which I have devised for collecting samples present certain advantages which render work easier and the following description explains the way in which the apparatus is constructed and the manner in which it is used. In Fig. 1 is shown a section through the wooden case (A); this case is square externally, and on the outside of it is pasted the label on which all the particulars are entered. It has a cylindrical perforation, extending from end to end, into which the swab tube (5) is placed for transmission by post to and from the laboratory or sanitary office. The wood of this case is prepared by soaking in a 5 per cent. alcoholic solution of perchloride of mercury. The two ends of the case (1) are closed with antiseptic adhesive plaster (2), and the ends of the glass tube (5) are protected by two pads of cotton wadding (3). The swab tube (B) is a narrow test-tube (5), closed by a long cork (4) through which is passed a firm galvanised iron wire very nearly as long as the glass tube. Round the free extremity of this wire absorbent cotton-wool is twisted so as to form a soft swab which should not be too bulky. These tubes are thoroughly sterilised in the autoclave, the cork lying loosely in their mouth. After sterilisation they are removed from the autoclave, dried in the hot-air oven, and whilst quite hot the cork is firmly pushed in so as to completely close the tube. The swab tube is then introduced into a sterilised case. The swab-holder (C) shows how the wire is fixed in the cork and how the swab end (6 *a*) is bent so as to prevent the possibility of the wire hurting the mucous membrane on which it has to be rubbed firmly. The cork is used to hold the swab; the length of the wire is such that products can be collected from the pharynx and false vocal cords without the operator's fingers touching the lips of the patient. The swab tube (D) is used to prepare the emulsion with which the Löffler's serum is inoculated. A small quantity of alkaline bouillon or peptone water (10) is introduced into the tube, the swab is well rubbed in it until the fluid is quite turbid, then the platinum spatula (9) is dipped into the fluid and rubbed successively on the slanting surface of the solidified serum contained in three different tubes.

The following label is prepared in such a way that all the particulars wanted for identification and investigation can be entered with very little loss of time by writing a number or crossing out a "yes" or a "no."

Name of Doctor
Address
Name of Patient *Age* *M.—F.* *Lab. D. No.*
Address
Date of Collection of Specimen *hour* (A.M. / P.M.) *Date of onset of illness*
Previous attacks of sore-throat frequent? Yes—No. *Diphtheritic?* Yes—No.

Place X over parts much inflamed. O over parts covered with false membranes. Underline parts over which swab has been rubbed.

R. Tonsil — *L. Tonsil.*
Soft Palate — *Pharynx.*
Nose — *Larynx.*

Highest temp. recorded *When?*
Submaxillary glands enlarged? Yes—No. *Tender?* Yes—No.
Albuminuria? Yes—No.
Chief complications.

N.B.—Simply scratch out "yes" or "no" when a positive answer can be given; if in doubt leave them as they are.

Directions.—1. Enter all particulars on this label. 2. Open case by lifting red plaster—withdraw tube. 3. Draw out swab by means of cork holder. 4. After placing patient in good light depress the tongue well with clean depressor. 5. Rub swab *firmly* over most affected part; when a thick false membrane can be removed this may be placed in the tube, but the swab must nevertheless be rubbed on inflamed mucous membrane also. 6. Replace swab without soiling mouth of tube, cork tightly. 7. Replace tube in wooden case. 8. Close case by fastening the plaster lid. 9. Enclose case in securely fastened envelope addressed—BACTERIOLOGICAL LABORATORY, OWENS COLLEGE.

Important.—The specimen should not be taken immediately after the application of any antiseptic to the throat. In every case it will be well to make, if possible, the patient drink a little boiled water or milk or beef-tea before the specimen is taken.

Local treatment used *Has serum treatment been used?*

The clinical details asked are not used as guides at all in the bacteriological work, they are wanted only for use afterwards to find out any relations which might exist between certain types of cases and the bacteriological results obtained. The details obtained in this way are communicated to the medical officer of health as they might prove of use to him in tracing certain epidemic types. Dr. Niven on his side gives me all the information which he can obtain regarding the course followed by the illness on which reports have been sent from the laboratory. In this way documents are accumulated which make it possible to test the value of our work and to carry out certain investigations.

The total number of cases of suspected diphtheria reported upon from the end of August, 1896, to the end of August, 1897, has been 394, of which 311 were Manchester cases and 83 from Stockport, Salford, Eccles, Withington, Moss Side, tretford, and Crewe.[3] In 119 cases diphtheria bacilli were detected. In 271 no diphtheria bacilli were found. In 4 cases doubtful results were obtained and were reported as such. So that in 390 cases out of 394—i.e., in very nearly 99 per cent. of the cases—definite results, either positive or negative, were obtained.

Regarding the amount of agreement observed between the laboratory results and the further clinical study of the cases I have been able through Dr. Niven's kindness to obtain the following information concerning the Manchester cases. 311 specimens taken from Manchester patients were examined; in 89 of these diphtheria bacilli were found and as the bacteriological diagnosis was invariably accepted nothing need be said about these cases. In 218 no diphtheria bacilli were found. Our negative report was not accepted by the medical attendant in 20 cases. In about half of the remaining cases the medical men wrote in answer to inquiries that they accepted our diagnosis. Regarding the other half we could get no information, but we had good reason to believe that if fault had been found with our report this would have been freely expressed, for the medical men were earnestly asked to do so without restraint.

Excluding the four doubtful ones there remain 307 cases. Our bacteriological reports were openly accepted in some 188 cases, received without opposition in 99 cases, and challenged in 20 cases. Of these 20, 3 which were admitted in the fever hospital developed scarlet fever; another was seen by Dr. Niven, who satisfied himself that the patient was not suffering from diphtheria; another case had, judging from the history afterwards obtained, scarlet fever; and in another case the patient recovered so rapidly that the diagnosis of diphtheria was difficult to support on any clinical ground. Of the 14 cases remaining after these have been excluded 2 seem to have been cases of diphtheria, but in none of the others has the information given us been sufficiently clear to make it certain that from a clinical point of view there was no doubt as to the nature of the illness. If we admit, however, that in 14 cases the bacteriological method failed to give accurate information this amounts to saying that in 4 per cent. of the cases on which we reported our opinion was not supported by the course taken by the case.

If we compare this result of bacteriological examinations as tested by clinical observation with those of clinical observation as tested by the bacteriological method we find that out of 307 cases suspected of being possibly affected with diphtheria not less than 218 were, bacteriologically, not cases of that disease, or if we exclude the 14 cases just alluded to in which our opinion was openly challenged, without our being able to prove that the error was not on our side, we find that 204 out of 293 cases of suspected diphtheria were affected with some other disease. This means doubt in 69 per cent. of the cases to compare with our 4 per cent. of error. But it might be said that the cases about which we have not received any expression of agreement or disagreement from the medical attendant should not be included in our estimates. Such an objection is easily overcome. After excluding those cases there remain still 207 reports, regarding which we have a definite opinion from the medical men. Out of these we have, on one side, 14 cases of unmistakable disagreement and, on the other side, 89 positive cases and 104

[3] Since this report was written it has become possible to obtain the number of cases examined from Jan. 1st to Dec. 31st, 1897; 500 cases were reported upon during that period.

negative cases in which our finding was clearly accepted or proved to be correct at the fever hospital. According to this estimate the clinical doubts would not be less than 50 per cent., whilst the bacteriological errors would not be more than 7 per cent.

It is not necessary for me to push these remarks further to prove my point, but I may add that at least ten of the cases in which no diphtheria bacilli could be found turned out after admission at the Monsall Hospital to be cases of scarlet fever, two of typhoid fever, and one of thrush. I give these only as examples of the difficulties of ordinary diagnosis and to show that although I have accepted as possible cases of error on my side fourteen cases (in which the clinical diagnosis of diphtheria was upheld by the medical man notwithstanding our not finding diphtheria bacilli), it is more than probable that I have under-estimated the accuracy of the bacteriological work. I should say that whenever we were at all dissatisfied with the swabs sent to the laboratory, either because they did not seem to have been well loaded with morbid products or contained few or no cultivable bacilli (probably owing to the action of antiseptic applications), we invariably requested that another sample should be sent. I may also add that in several cases of re-examination we obtained in the second and sometimes in the third examination the same results as in the first, showing that the method was applied with sufficient care to ensure constancy of results.

There are many interesting points in connexion with the practical effects of the utilisation of bacteriological diagnosis which I must reserve for a further communication by Dr. Niven and myself.

(To be concluded.)

A NOTE ON UNCOMPLICATED PURPURA IN CHILDREN; ITS AFFINITIES.

BY H. W. SYERS, M.A., M.D. CANTAB.,
PHYSICIAN TO OUT-PATIENTS, GREAT NORTHERN CENTRAL HOSPITAL.

THE number of cases of uncomplicated purpura seen in out-patient practice is very large. Cases, children almost exclusively, are continually presenting themselves in which the cutaneous affection is the only ostensible morbid feature. For several years I have given particular attention to this class of malady amongst my out-patients and especially endeavoured to ascertain whether, as is generally supposed and taught, there is really any connexion whatever (not merely casual) between this affection and rheumatism. In investigating these cases I have given the widest possible signification to the term "rheumatism," being quite content to admit as rheumatic those cases in children in which one or two joints only have been swollen and tender and to give weight also to the presence at a previous period of growing pains. Considering how often in a young child the joint manifestations of acute rheumatism are of the very slightest it would clearly have been unfair to exclude such apparently trifling evidence. I have entirely failed hitherto to trace any relation between the two maladies—the skin manifestation and rheumatism; and in hardly any cases have I found valvular disease of the heart—in so few that its presence was clearly accidental and had no reference to the purpuric condition being due to the rheumatism, which doubtless caused the endocarditis, either as cause, effect, or concomitant. Pain, if present, which has seldom been the case, has been almost entirely confined to the fleshy part of the limbs affected, nearly always the lower extremities.

I cannot recall a single case out of the great number I have seen in which the pain was prominent in or confined to a joint, still less a case in which a joint has been swollen or tender. But all my cases without exception have presented evidence of unhealthy surroundings and also, and still more markedly, of deficient or of unwholesome food. In many cases the hygienic conditions have been the very worst, ill-ventilated, stuffy rooms at the very least, and in some cases damp, badly-drained dwellings with defective light. In all cases there has been improper and deficient food and generally in the case of young children a grievous deficiency in the allowance of milk. I have found that if these faulty conditions of hygiene were rectified and the necessary changes made in the quantity and quality of the food that the complaint disappeared with the greatest rapidity. In fact, the treatment that is found to be curative in scorbutus is invariably the treatment which is immediately successful in cases such as those I describe. I am disposed to regard these cases in which, quite suddenly and without apparent cause, large numbers of purpuric spots appear, especially on the lower limbs, as scorbutic in nature. Probably the occurrence of such spots is the very earliest evidence of the morbid condition of the blood which has arisen from the causes above referred to.

In a few cases I have observed that there was slight softness and tendency to bleed on the part of the gums, but generally nothing of the kind was to be made out. Hæmaturia in babies is not infrequently the sole evidence of scorbutus which has been induced through improper feeding, and it does not seem impossible that the same morbid condition may manifest itself in older children—for in my experience the class of case to which these remarks apply includes children almost exclusively—by hæmorrhage into the skin. Be this as it may I have invariably found that the only efficient mode of treatment in these cases consists in regulating the diet and in improving the surroundings.

Fresh air, sunlight, good ventilation, together with fresh milk, orange juice, and potato gruel have been the agents most active in restoring the patient to health. Drugs may be entirely placed on one side; they are of no use and the administration of iron, ergot, tannin simply upsets the already disordered digestion and increases the mischief by rendering still more difficult gastric digestion. If anything of the kind is given I think quinine is the least unsuitable.

Of course, it is understood in these remarks that I refer only to the cases of purpura, nearly always occurring in children, which are slight and usually unaccompanied by other physical signs and symptoms. I say nothing with regard to the disease accompanying other morbid conditions such as morbus cordis, enteric fever, ulcerative endocarditis, &c. That is a totally different matter. But the point on which I would dwell is that in my experience these cases are much more allied to scorbutus than to rheumatism, with which they appear to me to have nothing in common. I regard them as mild forms of scorbutus. I have been led to this view by the experience gained during some years of a class of case met with in large numbers I suppose in the out-patient rooms of all large city hospitals.

Wimpole-street, W.

ON THE FLAGELLATED FORM OF THE MALARIA PARASITE.

BY E. LAWRIE, M.B. EDIN.,
SURGEON-LIEUTENANT-COLONEL, INDIAN MEDICAL SERVICE.

IN THE LANCET of Nov. 13th, 1897, there is an article by Dr. W. G. MacCallum, of the Johns Hopkins Hospital, Baltimore, U.S.A., on the Flagellated form of the Malarial Parasite, with a note of approbation by Dr. William Osler, the talented and highly trained professor of medicine, who was one of the first, if not the first, to discover that abscess of the liver is an infectious disorder. This article deals with observations on the comparative appearances of the blood of "infected crows" and of a "woman infected with the æstivo autumnal type of organism." Presumably these observations refer to Laveran bodies of the round so-called intra-corpuscular variety. Two forms of "parasite" are described by Dr. MacCallum which would seem to be common to infected crows and women suffering from the æstivo-autumnal type of Laveran body. One of these is a "hyaline" body which flagellates and is a male, the other is a granular body which does not flagellate and is a female organism. In malarial parasitology such terms as "hyaline" are as a rule the precursors of something startlingly new and exhilarating, and Dr. MacCallum's article is no exception to the rule, for he proceeds to represent the flagellum of the male organism as the living image of a spermatozoon. The habits of this "animal" correspond to a remarkable degree with its pretended anatomical resemblance to the male element of generation in higher animals and curiously enough Dr. MacCallum's particulars also correspond with Professor Schäfer's account of the fertilisation of

the ovum by the spermatozoon in "Quain's Anatomy."[1] It will no doubt be useful to contrast the leading facts of the two descriptions in parallel columns:—

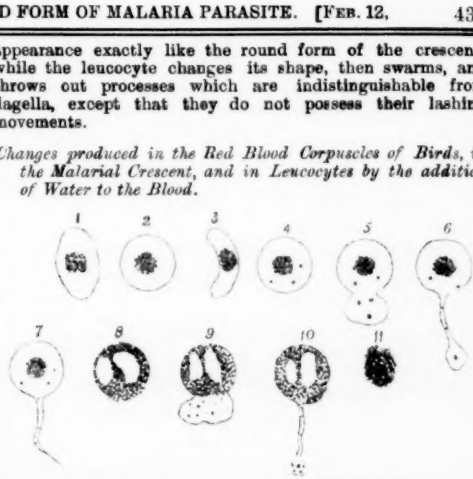
Schäfer's Embryology.	*MacCallum's "Sexual Process" in Laveran Bodies.*
1. The spermatozoa may be seen to penetrate the gelatinous investment and the head of one imbeds itself in the ovum.	1. Of these flagella one plunges its head into the sphere and wriggles its whole body into that organism.
2. The ovum becomes slightly protruded at the point of contact.	2. A conical process begins to appear at one side of the female organism.
3. One spermatozoon only as a rule imbeds itself in the ovum.	3. One flagellum only imbeds itself in the female sphere. "It seems to be impossible that another should enter."
4. As the spermatozoon passes towards the centre of the ovum it appears to exert a peculiar action upon the granules in the protoplasm.	4. As the flagellum passes into the centre of the female organism the "pigment granules in the protoplasm are churned up."

It is unnecessary to comment on this similitude except to point out that it throws a light on what follows. According to Dr. MacCallum the united form produced by the flagellum plunging its head into the female sphere has a bad time of it after this performance, as all the rejected flagella "may be watched circling about vainly beating their heads against the wall." The united forms quickly grow into a "spindle-shaped organism," one end of which is, as might be anticipated, hyaline; and, provided with this transparent beak, or perhaps spur, the organism rushes about prodding the unfortunate blood cells: "Red corpuscles lying in its path are punctured so that their hæmoglobin is allowed to escape, and after standing some time even the leucocytes may fall victims to the destructive force of these organisms, which have been seen to dash through them scattering their granules into the plasma." This is a new and altogether marvellous theory of malarious fever and anæmia. Dr. MacCallum completes the description, by saying, "the whole process described above seems to be a sexual process," and the organisms last depicted "*may be* the resistant forms that escape from the body during life into the external world." The words "*may be*," which I have italicised, illustrate the way the plasmodists have of throwing out a hint or suggestion which is afterwards quoted by themselves as an approved "scientific" fact, and, in the words of Professor Osler, as "another step in our still scanty knowledge of the life history of the malarial parasite."

The actual scientific value of Dr. MacCallum's observations may be fairly correctly estimated from his own statement that they were made on blood after standing for from twenty minutes to an hour and a half and more. But their accuracy under these telling conditions is open to grave question. Dr. MacCallum asserts that the flagella are developed from the hyaline forms of the Laveran body. Most plasmodists are agreed that they are developed exclusively from granular swarming forms. Further, I am at a loss to know what is meant by "infected crows" and by the "æstivo-autumnal" type of organism. Crows and malaria are both common—indeed, they are far too common, in India, but a malarious crow is a bird which I should imagine does not exist anywhere outside of the United States. The term "æstivo-autumnal" probably refers to something hyaline, i.e., to something which, like the "shadows" of red blood corpuscles, nobody but a plasmodist can see. It is a fair specimen of what passes current as "science" in malarial parasitology. As a matter of fact, the flagellated forms of the Laveran body are no more parasites than any of the other forms of that body are. Dr. MacCallum has omitted to state that Surgeon-Major Ronald Ross was the first to point out that the change of the crescent from the semilunar shape to the round form which flagellates, is hastened, if not in some instances brought about, by contact with the fluids in the stomach of the mosquito, and that Marshall has since demonstrated a precisely similar change by admixture of water with the blood. That is to say, by altering the density of the medium the crescent or spindle-shaped form of the Laveran body can be made to become round, then swarm, and then flagellate. But an analogous effect can be produced in the red blood corpuscles of hawks and crows, and in many of the leucocytes in human blood, by the addition of water. The spindle-shaped red blood corpuscle of the bird becomes round and is then in appearance exactly like the round form of the crescent, while the leucocyte changes its shape, then swarms, and throws out processes which are indistinguishable from flagella, except that they do not possess their lashing movements.

[1] Quain's Anatomy, tenth edition, vol. i., Part I.—Embryology, by Professor Schäfer, page 11. The account is taken from von Beneden's "Recherches sur la Maturation de l'Œuf et la Fécondation."

Changes produced in the Red Blood Corpuscles of Birds, in the Malarial Crescent, and in Leucocytes by the addition of Water to the Blood.



No. 1.—The oval or spindle-shaped red blood-cell of birds.
No. 2.—The same blood-corpuscle become round after the addition of water to the blood.
No. 3.—The malarial crescent.
No. 4.—The same crescent become round after the addition of water to the blood. It is now identical with No. 2 in appearance except that a few of the granules of its central intra-corpuscular mass may sometimes be seen swarming in the protoplasm of the cell. It must be noted that the intra-corpuscular body in the crescent which swarms sometimes retains its intra-corpuscular shape, while at other times its granules spread out over the interior of the cell.
No. 5.—The crescent in watered blood, round, the granules swarming, and showing the first stage of flagellation. This process commences as the shedding of the granules does in the leucocyte (No. 9) by the protrusion from the cell of a cloud or puff of protoplasm, into which two or more of the granules swarm. The difference between the two is that while the puff or cloud of protoplasm is violently agitated, in the case of the crescent it is quiescent or only displays slow movements in the case of the leucocyte.
No. 6.—The second stage of flagellation. The puff or cloud of protoplasm elongates, the granules swarming into it. A similar stage is seen in the leucocyte (No. 10), but the process is violently agitated in the crescent and only possesses slow movement in the leucocyte.
No. 7.—The flagellum completed in the crescent. The granules swarm into it and it moves with a rapid, lashing movement, which is not seen in the leucocyte.
No. 8.—A leucocyte in watered malarial blood, swarming.
No. 9.—The first stage of throwing out a flagellum-like process in the leucocyte.
No. 10.—The second stage of flagellation in the leucocyte.
No. 11.—The final stage in both the crescent and the leucocyte. The protruded processes of protoplasm are either withdrawn into the cell again or they disappear or fade away. The cell outline likewise fades and nothing is left but a confused mass of granules.

In Nos. 5, 6, and 7 active swarming and lashing movements are seen. In Nos. 9 and 10 the swarming movements are seen in the same active form as they are in the swarming crescent, but the lashing movements have not been observed. What has been seen is that the rounded crescent has been observed to be extruded from the interior of a leucocyte, to flagellate actively outside it, and then to go back into the interior of the leucocyte again and ultimately to become a mass of granules as in No. 11. This is only an example of what is very commonly seen in connexion with leucocytes in healthy blood. Processes of protoplasm and granules are shed outside the cell, move about detached for a time, and are afterwards enclosed again in its interior. I should like to ask through the medium of THE LANCET where this travesty of science in the guise of malarial parasitology is to end? The support of the entire fabric is to be found in the one solitary fact that quinine cures malarious spleen and fever, so that the plasmodists are able to proclaim with a great show of plausibility that it "kills the parasite." But the action of quinine in curing malarious fever formed a recognised principle of medicine long before the plasmodial era, and I do not know any of the thousand-and-one plasmodial theories connected with the etiology and pathology of malarious fever which will bear examination any better than Dr. MacCallum's and Dr. Osler's conception of a "sexual process" among the suppositious male and female malarial organisms on a slide, identical with that which obtains among the higher animals in the fertilisation of the

ovum in the Fallopian tube. Moreover the plasmodists are utterly unable to demonstrate their "parasite" in anything but malarial blood, and this by no means in every case of malarious fever, for the Laveran body is never found in the blood in those inveterate forms of the disease where the spleen is much degenerated. Until they can show the "parasite" in some other environment than human blood I for one shall maintain the opinion that the assumption that the Laveran body is a parasite is altogether false and misleading. All the evidence goes to show that the Laveran bodies are altered blood-cells closely related to the leucocyte, and that they are, like it, products of the blood. If the Laveran bodies are to be regarded as parasites the leucocyte must also be regarded as a parasite. This brings us to the key to the whole position. Little or nothing is known of the true physiology of the leucocyte, the "science" of the plasmodists being satisfied with the way it takes a stain and the most learned physiologists assigning to it no higher *rôle* than that of a phagocyte or scavenger. If physiologists in Great and Greater Britain would devote some of the time they spend in hunting for patent hearts in order to bolster up a perilous method of chloroform administration to a genuine research into the physiology of the leucocyte the bottom would very soon be knocked out of the sham science of malarial parasitology, of which Dr. McCallum and Dr. Osler are the most recent exponents.

Hyderabad, Deccan.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF TWIN PREGNANCY: MISSED ABORTION AT THIRD MONTH; RETENTION OF DEAD OVUM UNTIL AFTER DELIVERY OF SECOND FŒTUS ALIVE AT FULL TERM.

BY ATHOL S. J. PEARSE, M.B., B.C. CANTAB.

ON Jan. 25th, 1898, I was called in to attend a married woman, aged thirty-three years, who was in labour with her fifth child. The labour was a normal one; the placenta was easily expressed fifteen minutes after the birth of the child, and on examination was found to be apparently complete. Two days later (on the 27th) a very foul-smelling mass was passed with pain, and this on examination I found to be an ovum of between two and three months, complete with small placenta and membrane. I saw no fœtus. Inquiry then elicited that the patient fell pregnant early in May, 1897. Early in August she had a severe fright caused by a thunderstorm and she lost some blood per vaginam for two or three days together with some pains in the stomach. These stopped and then pregnancy progressed normally until delivery at term.

The child, born alive, was a small one, as also was the placenta, which appeared to be complete. The patient was quite in her usual good health during the whole time of pregnancy although, as afterwards was proved, she had a decomposing ovum in her uterus along with the live fœtus. She made a rapid recovery without any bad symptoms.

Cardiff.

ARITHMOMANIA.

BY L. A. PARRY, M.D., B.S. LOND., F.R.C.S. ENG.

THIS affection, which is, I believe, far more common than is generally allowed, is one of the many groups of the *tic convulsif* (*Gilles de la Tourette's disease*) of the French. It is a psychosis occurring chiefly in families with a well-marked neurotic inheritance, the age of onset being as a rule quite early, from six to ten years, occasionally later. The cases which I am about to relate all belong to the same family—they were, in fact, all first cousins. There were no instances of epilepsy, fits, or insanity, and no neurotic tendencies in any of the parents or members of the family with the exception of the arithmomania in the children themselves.

CASE 1.—The first case was that of a well-developed boy of about ten years of age. He had had no illnesses previously except some of the fevers so common in childhood. The onset of the attack was insidious; he gradually became absent-minded, took a long time to answer when spoken to, the question often having to be repeated three or four times, and there was frequently a peculiar fixed stare in his eyes as if his thoughts were far away. He could never enter a room in the normal manner, but was compelled to turn the handle of the door three times, start to make his entrance, and then draw back three times, or else kick one leg against the other three times before he started. When passing an object he was often compelled to touch it three times before he could walk on; in fact, three seemed to be his golden number. There was never any tendency to involuntary muscular movement, as is generally the case; it was throughout the mental disturbance which was the prominent feature. He was treated with arsenic, plenty of fresh air, and good food, but no improvement could be noticed in any way attributable to these therapeutic measures. The symptoms very gradually disappeared and now some years later all that remains is a slight tendency to absent-mindedness.

CASE 2.—The next example was a cousin of the patient in Case 1, a girl of about seven years of age, who again presented no spasmodic movements, only slight mental disturbance. She was unable to bid her parents good night in the manner usual to children, but felt compelled to get out of bed and repeat at intervals her usual valedictory words, "Good night, mother," and when her mother would reply "Good night, C——," all was well for a moment. Then again would be heard the cry, "Good night, mother," and again the answer, "Good night, C——," would be given, and so on for a dozen times or so. If she touched anything she was obliged to repeat this touching first with her right hand, then with her left hand, again with the right, and lastly with the left. When walking along the street she would suddenly dart into the middle of the road, put her feet into a certain definite position, make a peculiar growling noise with her throat, and then return to the point from which she had started. She has gradually got well without any treatment except moral suasion and is now a perfectly healthy young woman.

Several other slighter instances of this affection in members of the same family have presented themselves to me, but none of them were marked and all of them are now free from any tendency to arithmomania.

Bartholomew-road, N.W.

CASE OF RUPTURE OF THE RIGHT VENTRICLE OF THE HEART FROM A BLOW IN THE EPIGASTRIC REGION.

BY THOMAS FISHER, M.R.C.S. ENG., L.S.A.

THE patient was a man, aged twenty-five years, strong and robust, a noted pugilist and heavy-weight lifter. In an intoxicated condition he assaulted his neighbour, who, in self-defence, struck him in the stomach, from which blow he fell to the ground insensible and never regained consciousness. In this unconscious condition he was taken home, a distance of two miles, and after some delay I was sent for. On my arrival I found him quite dead, one and a half hours having elapsed from the time of the injury until I saw him, he having then just expired.

The post-mortem appearances were as follows:—The body was well nourished. There was a slight contusion in the right temporal region. There was no apparent bruise on any other part of the body. On removal of the scalp extravasation of blood was seen in the right temporal region. On removal of the calvarium the membranes of the brain were found to be very vascular. The brain was covered with minute petechiæ and was generally vascular. The skull was fractured in the right temporal region obliquely from behind forwards with no displacement of bone, and there was no injury to the dura mater and no clot. On opening the chest the pericardium at once bulged forward and was seen to be much distended; on opening it was found full of clots, dark in colour. The heart was large,

weighing 14¼ oz. There was marked dilatation of the right ventricle in which was found an oblique rupture from above downwards, irregular at the edges and measuring in length 3½ in. The widest part of the heart was 5½ in., and the greatest length was 5½ in. The general appearance of the heart was pale in colour, and there was an abnormal quantity of fat in the pericardial region. The valves and blood-vessels were normal. The microscope revealed marked fatty degeneration. The lungs receded backwards from the pressure of distended pericardium; they were very highly congested with venous blood. The bronchi contained sero-sanguineous matter. The lungs were otherwise healthy. The pleural cavity contained a few ounces of serum slightly blood-tinged. The ribs were not injured. The abdomen and stomach were distended with gas and congested and contained no fluid. The intestines were healthy but congested. The liver, kidneys, and spleen were healthy but congested. The bladder was healthy, containing urine, which was normal. The spinal column and ribs were carefully examined and no bruise of any kind was to be found.

This rare case is interesting in many points. Here was a young man noted for his pugilistic powers and great strength with an abnormally large heart at the age of twenty-five years. I might here add that there was no history of rheumatic fever tubercle or syphilis but he was a practised pugilist and heavy-weight lifter for years. Another interesting point also is that the man apparently lived with a ruptured heart for one and a half hours and was subjected during this period to rough treatment, his friends believing him to be so intoxicated as to be totally helpless and the poor fellow was taken home two miles distant in an ordinary farmer's cart. All witnesses called at the inquest agreed that the patient fell from the first blow and that such blow was in the stomach and from that moment he never showed the least sign of consciousness. He was kicked when on the ground and this, no doubt, accounted for the fracture of the skull in the temple. There was not the slightest bruise to be seen in the epigastric or thoracic regions or anywhere else except the temple. The causes of the rupture in this case were evidently three-fold—(1) the abnormally dilated right ventricle causing thinned walls; (2) abnormal distention of the whole heart due to excessive stimulation; and (3) the blow in the stomach (containing gas) quickly raised up the diaphragm and thereby acted on the already distended and weakened heart, hence the rent in the right ventricle, the weakest part of the organ. It seems almost impossible that life could last one and a-half hours after such an injury. My opinion is that the rent was small to commence with but that by continued action of the heart it was increased. The pericardium was exceedingly tense and the pressure of the clots on the heart must have been very great. Lastly, the circumstances of this case prove that a blow of sufficient force may be dealt with the fist to practically cause death without any evidence of the same. The blow being over the solar plexus must have caused a great amount of shock apart from the cardiac rupture. The specimen was sent up to St. Thomas's Hospital Museum.

Garstang.

CLIFTON DISPENSARY.—The annual meeting of the Clifton Dispensary was held on Feb. 1st under the presidency of Canon Wallace. The report showed that during 1897 there had been 4094 cases treated, of which 3813 were medical, 180 were surgical, and 101 were midwifery cases. The receipts amounted to £833, including a balance of £223 from the previous year. The chief items of expenditure were salaries £289, medicine and medical sundries £85, and after paying all expenses there was a balance in hand of £125.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—The annual meeting of the Newport and Monmouthshire Hospital was held on Jan. 31st under the presidency of Lord Tredegar. The report showed that during 1897 there had been 569 in-patients admitted, a decrease of 19 from 1896; 1168 out-patients had been attended, as compared with 1450 in the previous year; and 2470 dispensary patients had been treated, as against 2885 in 1896. The financial report showed a good balance in hand. Lord Tredegar stated that only about half the funds needed for the completion of the new hospital had been raised and that the third and last year had been entered upon for which Dr. Garrod Thomas's offer of £5000 was available.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF RIGHT LOBAR PNEUMONIA, EMPYEMA, AND SUPPURATIVE PERICARDITIS IN A CHILD; PLEURA AND PERICARDIUM DRAINED; DEATH TWELVE DAYS AFTER THE LATTER OPERATION; NECROPSY.

(Under the care of Dr. CHEADLE.)

FOR the notes of the case we are indebted to Dr. F. John Poynton, medical registrar to the hospital.

A girl, aged four and a half years, was admitted on Dec. 22nd, 1897, to St. Mary's Hospital. On Dec. 17th the patient had seemed drowsy and did not care for her food. On the 19th the general malaise had increased and in addition she complained of pain in her "stomach and back." The symptoms increased from this date until her admission on the 22nd. The family and personal history threw no light on the condition. On admission the temperature was 100·4° F., the pulse was 168, and the respirations were 56. She was an intelligent little child, drowsy and flushed and evidently very ill. The impulse of the heart was felt below and just internal to the nipple and the sounds and area of dulness were natural except for the rapidity of the former. The respiration was grunting and laboured. The movements of the right side of the chest were impaired and there was dulness below the fifth rib posteriorly extending as far outward as the mid-axillary line. This area of dulness could be roughly divided into two portions, an upper and outer, over which rhonchi and coarse râles were heard, and a lower and inner, over which the breath sounds were diminished as also was vocal resonance. A few rhonchi and râles were heard at the inferior angle of the left scapula. Beyond the fact that the lips were dry and the tongue was extremely coated there were no abnormal alimentary signs. The urine was febrile but contained no albumin. From the day of admission on the 22nd to the 27th the condition varied but little but on the whole improved. The temperature ranged from 103° to 99·6°, the respirations were about 50, and the pulse was very rapid, being 144 on an average. On the 27th it was noted that the dulness continued very marked at the right base and that the diminution of the breath sounds remained constant. Dr. Cheadle made a special note that there was some crepitation below the right nipple and that the cardiac dulness on the left side reached to the upper border of the second rib very distinctly but the heart sounds were clearly audible. A small ice-bag was applied to the præcordium. On the 28th the upper limit of the heart was the same; to the left the dulness extended three-quarters of an inch external to the nipple and to the right to the mid-sternum. The impulse was diffuse but the sounds were clearly heard. The temperature was lower, ranging from 101·8° to 98·8°, the pulse was 130, and the respirations were 60. On the 30th Dr. Cheadle made a special note that the breathing was good over the upper part of the left front down to an inch above the nipple. The area of cardiac dulness had diminished. The right chest was aspirated and two and a half ounces of a brownish opaque fluid were obtained. Previously to this the temperature had risen to 103° and the child was in every way not so well. On the 31st the operation for empyema with resection of a portion of the seventh rib was performed on the right side and three ounces of thin pus were evacuated. On Jan. 1st, 1898, in spite of free discharge the temperature did not come down, but throughout the day ranged between 101° and 103°. Though the right lung appeared to expand during the next few days, the pulse and temperature remained unsatisfactory and the heart sounds were much fainter. During the night of the 4th there was a marked change for the worse. On the 5th the child, though perfectly

sensible, was feebler and blue round the lips. She refused to take food and her breathing was much distressed, especially if she was raised from the pillow upon which she was propped. The pulse was 130, the respirations were 68, and the temperature was 101·8°. The cardiac dulness was mapped out by Mr. Gwynne Lawrence, Dr. Cheadle's house physician. The extent was as follows: From one finger's breadth external to the left nipple line it extended upward to the level of the second rib. Across the middle line to the right side just internal to the vertical nipple line and tending from the horizontal level of the nipple downward and outward to form an obtuse angle at the junction with the liver. No impulse could be felt. The heart sounds were very faint and this combined with the respiratory abnormalities due to the empyema gave a general impression of the heart perhaps best expressed by saying that it was lost. Over this dull area on the front of the chest there was a sense of resistance but no fluid thrill. The condition of the left lung except for some impairment of note at the inferior angle of the left scapula was natural. There was also some impairment over the back of the right lung in the position of the empyema.

On Jan. 5th Dr. Cheadle saw the child at midday and considered that there was suppurative pericarditis and after consultation with Dr. Lees and Mr. Pepper the latter opened the pericardium at 3·40 in the afternoon. The condition immediately before the operation was as noted above except that the pulse had risen to 160° and the respirations to 74. There was apathy and the lips were blue. An incision was made in the fourth space to the left of the sternum; there was no bulging, but on incising the pericardium pus at once escaped freely and continued to do so for some little time. The pus was thick and not offensive; the exact quantity could not be estimated. The escape was markedly affected by the respiratory movements and in addition Mr. Pepper noted a confused movement given to the out-flow, but no definite cardiac pulsation. A small tube was sewn in and the wound was partially closed and dressed, the child throughout being kept under the minimum of anæsthetic needful for the purpose. Immediately after the operation the pulse was 138 and the respirations were 62. The breathing was much easier and the note in the first and second spaces on the left improved. Seven hours afterwards the wound was dressed by Mr. Lawrence and there was abundant discharge of pus from the pericardial opening; it was cream-coloured, not offensive, and contained solid masses. The child was more vigorous and the lips were a good colour. On the 6th the temperature was 99°, the pulse was 120, and the respirations were 48. There was improvement in every way and she took interest in her surroundings. There was now resonance in the first and second spaces on the left side and the wound was discharging freely. The movements of air in the tube resembled precisely those in an empyema tube and there was no impulse transmitted from the heart. On the 7th the heart sounds were heard plainly and most intensely in the fourth space on the left side. The discharge was not so free and the temperature rose to 103°. On the 8th the tube was coughed out with a good deal of greenish pus, and was replaced by a longer one. On the 10th the pus was a little offensive and the temperature slightly lower (between 101° and 103°). Both lungs were expanding well. On the 13th the patient was weaker and more dulness was detected on the right side of the chest, coincident with which there was less discharge from the empyema. Mr. Pepper passed in a probe and liberated some lymph flakes and offensive pus from the right pleura. On the 14th the child was more cheerful but weaker and refused her food. The temperature reached normal in the evening, having been distinctly on the decline the previous two days. The pulse was more rapid and more feeble. On the 16th the temperature was normal and subnormal, but now obstinate vomiting commenced and the child was obviously sinking from exhaustion. She died quietly on the 17th, twelve days after the pericardium had been opened and thirty-one days from the onset of the illness.

Necropsy.—The post-mortem examination was performed by Dr. Poynton; permission for the thorax only was given. The body was emaciated. The two operation wounds were in a healthy condition. The sternum was very adherent to the anterior mediastinum and pericardium owing to mediastinitis. On exposing the front of the thoracic viscera the appearance was remarkably like the normal except for the opening in the pericardium at its lower and left margin. This opening was round and slightly bevelled. The lungs overlapped the heart much as usual. The pericardium on closer examination was found to be considerably thickened and on opening it about two teaspoonfuls of pus escaped. The heart and adjacent surfaces of the pericardium were covered with flakes of yellow lymph, which as well as the lymph in the empyema were found by Dr. Bill to contain diplococci lanceolati. There was one slight recent adhesion between the pericardium and the heart. This was in front just above and to the right of the opening in the pericardium. The valves of the heart were quite healthy and the cavities were not noticeably dilated. The right lung was completely adherent to the chest wall in front by recent adhesions; the empyema was situated chiefly on the posterior aspect of the right lung and barely reached forward as far as the mid-axilla it was completely drained by the tube passing in at the lowest limit of its vertical extent. Posteriorly, it extended backward to the vertebral column; upward gradually tapering it reached the level of the second rib. The cavity was lined with a layer of yellow lymph. The empyema came in closest proximity to the pericardium posteriorly, but no direct communication could be traced from the empyema to the pericardium. The lower lobe of the right lung was pneumonic but the upper and middle lobes were crepitant. There were some recent pleuro-pericardial adhesions between the upper lobe of the left lung and the pericardium, but there was no trace of pus. The left lung appeared to be healthy and there was not any peritonitis.

Remarks by Dr. POYNTON.—The difficulties in the diagnosis of purulent pericarditis in young children are admittedly so great that I venture to bring into relief some of the most important features bearing upon this question in the above case. The early symptoms were persistent high temperature and rapid pulse with dyspnœa and prostration, an increase of the cardiac area, especially upward and to the left, with a gradual disappearance of the heart's impulse and sounds. There was no friction heard at any time. When fully developed the cardiac dulness to the right of the sternum did not curve inward as it reached the hepatic dulness, as in dilatation, but passed downward and outward to form an obtuse angle with this dulness. The tube in the pericardial opening might have been in the pleural cavity so far as the movements of the air with respiration indicated, for except that there was a confused additional movement at the time of operation there was never any sign of the cardiac pulsations. The diagnosis rested before the operation between a localised empyema on the left side in front displacing the heart somewhat to the right and the actual condition, but against the former was the fact that the left lung and pleura had been practically free from any distinct evidence of disease. The absence of any communicated cardiac pulsation at the time of the operation and afterwards once more raised this doubt. Finally, Dr. Cheadle when commenting on the case pointed out the association of these multiple suppurations in the chest with outbreaks of influenza.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on Immunity and Latency after Operations for Cancer of the Breast.

A MEETING of this society was held on Feb. 8th, Dr. HOWSHIP DICKINSON, the President, being in the chair.

The adjourned discussion on the paper by Mr. MARMADUKE SHEILD on Immunity and Latency after Operations for Cancer of the Breast was resumed.

Sir THOMAS SMITH congratulated Mr. Sheild on the fair and judicial manner in which he had presented his facts, so that the impression left on his mind when the paper was finished was that Mr. Sheild had arranged the cases to show the good results which followed the older methods and it was not until later in the discussion that he found he was an advocate of what had been called the complete method. He strongly deprecated the drawing of dogmatic conclusions as to the treatment

of cancer in the present incomplete state or our knowledge. The last time that there had been a general discussion on cancer of the breast was in 1874 at the Pathological Society, at the time when Sir William Jenner was president, but the discussion then was chiefly on pathological points. Little more was known of the nature of the disease than was known then and therefore an open mind was desirable. His own impressions of the results of operation for mammary cancer tallied pretty closely with those of Mr. Sheild. It was impossible to avoid comparing the old and the new methods (using those terms in preference to "incomplete" and "complete"). The new method which had been born in America and bred in Germany had been adopted somewhat hastily in this country and many of its advocates had not treated the question in the fair and impartial method which had been adopted by Mr. Sheild and Mr. Watson Cheyne, but made the most dogmatic statements and spoke with a kind of pity of those who did not adopt their views. Those who still adhered to the other methods had hitherto kept silence, but even the crushed worm would turn. The views held by the advocates of the new method seemed to be that cancer was a local disease, that it was curable by operation, and that a case was to be considered as cured if the patient was alive and free from any sign of growth at the end of three years. With regard to the local nature of cancer he could not understand at what stage it was held that it ceased to be a local disease. It required a strong belief in the local nature of cancer to justify some of the more formidable operations for cancer which were practised. He would ce tainly not allow that cases in which glands beneath the clavicle were involved and the arm had to be removed in order to get away all the growth could be considered as any longer local. In the case of syphilis as soon as the local disease had manifested itself general infection had occurred and excision of the chancre did not prevent general symptoms. In the case of cancer he thought that long before the growth was tangible it had ceased to be a local disease. He regretted the use of the term "cured" at all in connexion with the subject. It misled the public and in the present state of our knowledge of the subject was quite premature. Mr. Sheild's paper, and, he thought, general experience, showed that recurrence often recurred at periods greater than three years. He had lately been called on to remove carcinomatous glands from the axilla of a patient whose breast he had assisted Sir James Paget to remove twenty-four years ago, the recurrence having only been noticed lately, and he could give examples of recurrence at any period between that time and three years. The number of cases in which recurrence had occurred after three years had been estimated by one writer as high as 15 per cent. He noticed that both in Mr. Sheild's paper and in Mr. Watson Cheyne's lectures it was shown that after the complete operation there appeared to be special tendency to metastatic growths in the viscera. Where there were small local recurrences life could be prolonged by their successive removal. He was inclined to think that it was possible that the removal of *healthy* glands might precipitate the spread of the disease and Mr. Teale had suggested a similar idea. In a case quoted by Mr. Watson Cheyne some hard glands were left in the axilla of a patient whose breast was removed for cancer and it was not for fifteen years that they required removal. Owing to the altered circumstances of operation it was misleading to contrast present results with those obtained more than twenty years ago and he thought that Sir James Paget had been influenced by his experience in those early days in forming a pessimistic view as to the future of patients after operation. He thought that the chief factors in bringing about immunity after operation were the stage at which the operation was performed, the type of the growth, and the soil in which it had grown. Growth and recurrence were much more rapid in the tissues of a vigorous, florid, child-bearing woman than in those who had passed middle life. As regards the operation he always removed all visible diseased tissue and except on a few occasions he had removed the whole breast as well. He had been able to follow up two of those cases. In the first, that of a florid woman with cancer involving the nipple and areola, the growth only was cut out and the surface left was treated with caustic. She enjoyed perfect health for seven years and then recurrence took place, not in the breast, but in the axilla, and three operations were required at intervals of a year and at the present time she was quite well. In the second case, with a growth of a similar type, he cut out the nipple and areola in April, 1887. No caustic was employed and the wound was allowed to granulate up. When seen in January, 1897, she was well and there was no sign of recurrence in the breast or in the axilla.

Mr. HUTCHINSON said that his experience was much the same as that of Mr. Sheild. He was a firm believer in operative "cures" of cancer, using the term in the same sense that recurrence did not occur. He reminded the society that such cures were not new, but occurred in the practice of surgeons many years ago. Dr. Smith, of Cheltenham, had communicated to him particulars of two cases operated on by the late Mr. Phillips, of the Westminster Hospital. In one the patient (who was operated on in 1849) was quite well till 1869, when she developed a growth described as "keloid" over the other breast; and another patient operated on in the same year was perfectly well more than twenty years after. He thought that the knowledge of the pathology of cancer had advanced a good deal since the discussion to which Sir Thomas Smith had referred. It was now recognised that it was a chronic inflammatory condition and that there was an infective process and that it remained a local disease for a considerable time. The analogy with syphilis was not convincing. It was very important to try to ascertain in each case how long the disease remained local. It was certain that there was a predisposition, often hereditary, to the occurrence of cancer and this predisposition remained even after the complete removal of one growth and he insisted that many of the cases of recurrence after a long interval were really examples of a second attack of cancer in a predisposed individual. He owed much to the late Mr. Campbell de Morgan for his teaching on the local nature of cancer and the importance of its early removal. At one time he (Mr. Hutchinson) used to clear out the axilla, but he now rarely meddled with it unless he could feel something. To do so certainly increased the severity of the operation. He thought that the old operation gave a fair chance of a cure (using that term somewhat loosely) if it were done at an early stage. Even if some general infection had occurred it was of benefit to the patient to have this large focus of infection removed. He remarked that his best results had often been obtained in those cases which at the time of operation had not seemed hopeful. In one case in which there was a large, soft, rapidly-growing scirrhus in a young patient there had been no recurrence in fourteen years and in another there was a large ulcerated cavity into which the fist could have been placed. The breast was removed and now, six years later, there was no recurrence. He strongly urged the early performance of operation and he thought that it was due to the earlier operating at the present time that the improvement in results was to be attributed rather than to the more extensive character of the operation.

Mr. T. W. NUNN said that the moral of Mr. Sheild's paper was that the surgeon should operate early and widely. He thought that immunity and latency were largely due to individual peculiarities of the patients, as were the extremely rapid growth and general infection which often occurred. In some cases cancer appeared to be an affection of the lymphatic system and no operation would be adequate. He thought that recurrence in the opposite mamma was not so rare as Mr. Sheild had implied. Copeman found it in 19 per cent. of the cases of mammary cancer which he collected. With regard to the prolongation of life he thought that 8 per cent. of the cases lived from ten to twenty years after operation.

Mr. HOWARD MARSH devoted his remarks chiefly to the method of operating. Personally he always removed the whole of the breast and he invariably opened the axilla. In many cases it was impossible to detect enlarged glands through the skin. There were four structures concerned in the origin of the growth and in recurrences—the breast, the skin, the fascia with its lymphatics, and the lymphatic tract in the axilla. All of these structures should be freely removed. The skin need not be accurately brought together, although much could be done by shifting flaps of skin. If a gap were left it could be filled up with Thiersch grafts. The fascia should be removed from the surface of the pectoralis major. He did not remove the pectoral muscle as Halsted had recommended, as he knew of no case in which recurrence took place in the muscle. This removal of the muscle increased the severity of the operation and had dangers of its own. The patients suffered from much shock and several had died from that cause. Often, too, the arm became fixed to the side and there was persistent œdema of the skin of the upper part of the thorax and great pain.

Mr. A. E. BARKER said that for the last twelve years he

had been accustomed to clear out the axilla in all cases, taking away all the fat and glands up to the clavicle, and to strip off the fascia from the pectoral muscle. Performed in this manner he did not think that the risks of the operation were increased in the least and he thought that there had been a great increase in the comfort of the patient and that there was less risk of intercurrent troubles, only one of his cases having died from the operation. He thought that the principal factor in the improved prospects after the operation was the routine removal of the glands. He agreed with Mr. Hutchinson that the best results were often obtained in cases which appeared least promising. One of his patients had a mass of cancerous glands removed from the axilla as well as a large tumour from the breast and she was alive and well nine and a half years afterwards.

On the motion of Mr. PEARCE GOULD the discussion was adjourned to the next meeting on Feb. 22nd.

OPHTHALMOLOGICAL SOCIETY.

Epithelial Xerosis of the Conjunctiva.—On the Function of the Rods of the Human Retina.—The Localisation of Foreign Bodies in the Eye and Orbit by Means of the Roentgen Rays.

AN ordinary meeting of this society was held on Jan. 27th, Mr. HENRY EALES, Vice-president, being in the chair.

Mr. SYDNEY STEPHENSON made a communication upon Epithelial Xerosis of the Conjunctiva, which he said was not uncommon in England, since among 6209 children he had found no fewer than 1·87 per cent. affected. At particular places the examples of xerosis ranged from 0·66 per cent. to 9·47 per cent. After describing the appearances and bacteriology of the affection he passed on to consider its relationship to night blindness, which he regarded as something more than merely accidental. He pointed out that xerosis in the absence of hemeralopia was supposed to give rise to no symptoms beyond such as were presented by the conjunctiva. He had found, however, changes in the visual field—namely, (*a*) a reduction in size and a transposition of the red and green fields, and (*b*) a slight contraction in the limits of the field for white. The former was constant, the latter not always present. The retinal reflexes in these cases appeared also to be exaggerated. Mr. Stephenson concluded that every eye with epithelial xerosis was in a state of torpor retinæ. In discussing the causes of xerosis he laid stress on two factors—first, lowered nutrition, and secondly, dazzling by bright light. Most of his patients suffered from internal otorrhœa, hypertrophied tonsils, peripheral vascular opacities of the cornea, relapsing pustular eruptions of the face or scalp, or other signs of "scrofula" or tubercle. Hæmoglobin, according to Mr. Stephenson, was always reduced in amount, averaging in his cases of xerosis 65 per cent. of the normal, as tested by Gowers's hæmoglobinometer. As the conjunctival changes disappeared the proportion of hæmoglobin rose, but never to normal. This led him to inquire whether among children it was always below par. In conjunction with Mr. C. G. Burton he examined 164 healthy children, with the result that it was found to vary from 65 per cent. to 95 per cent. and to average 76·62 per cent. of the normal. Mr. Stephenson further claimed that in xerosis the red blood-cells were sometimes reduced in number. As to treatment, he strongly recommended iron, preferably in the form of Blaud's pill. Mr. Stephenson quoted a number of cases and illustrated his paper by cultivations and microscopical preparations of the xerosis bacillus.—Mr. ARNOLD LAWSON spoke of the morphological resemblance which the bacillus of xerosis bore to the Klebs-Löffler bacillus of diphtheria, though the manner and conditions of growth varied widely. The remarkable thing about the xerosis bacillus was its inertness, though it was so plentiful and swamped all the other bacilli.—Mr. BREUER said that constitutional ailment and not the xerosis was the cause of the symptoms in this disease. In one case in which a post-mortem examination was made cirrhosis of the liver was found, bile acids dissolved the visual purple, and there may have been some relationship between the night blindness and the altered function of the liver.—Dr. EYRE had attempted to raise the pathogenicity of the xerosis bacillus by varying the conditions of growth and by injecting toxin to impair the resistance of the subject, but all his results had been negative and the bacillus remained inert.—Brigade-Surgeon-Lieutenant-Colonel DRAKE-BROCKMAN had seen a great deal of this affection in the East and was glad to find his own observations in most respects confirmed. It was especially frequent in badly nourished children or those affected with tubercle or syphilis or intestinal parasites; it occurred among adults during famines. Those affected went to lie down directly the sun set. He found iron preceded by the removal of intestinal parasites the best treatment.

Mr. A. BREUER read a paper on the Function of the Rods of the Human Retina and dealt with the new theory of Kries regarding the function of the human visual apparatus. He described experiments of his own which tended to confirm the statement that the function of the rods differed from that of the cones. By means of experiments after adaptation of the eye for dark he demonstrated that the sensibility of the periphery of the retina for feebly illuminated objects was very much greater than that of the macula. Under these conditions (dark adaptation) the macular part of the visual field was represented by an absolute scotoma the exact extent of which was found to vary according to the intensity of the illumination employed. The weaker the illumination and the longer the adaptation of the eye for the dark the greater this area became. Other experiments made by Kries illustrated the same fact. He observed, for instance, that colour equations found by direct fixation and in a strong light no longer held good with peripheral vision under feeble illumination. These changes, moreover, were most marked when employing lights of short wave length. All these points were modified examples of the well-known phenomenon of Purkinje, who showed first, that when blue and red objects of equal luminosity were selected, the blue gained considerably in brightness as the eye was longer adapted for the dark. This difference, however, as Kries had shown, did not take place in small fields which fell entirely within the macula. Hence it was clear that the functions of the periphery of the retina and the macula were distinct. Other authorities attributed these differences to the presence of the yellow pigment in the macula. Mr. Breuer detailed an experiment which proved that this assertion was not supportable. Further, Mr. Breuer in a paper published in the *Zeitschrift für Physiologie und Psychologie der Sinnesorgane*, Band xiv., measured quantitatively the amount of absorption effected by the macular pigment for spectral lights of different wave lengths and found it quite inadequate to account for the differences between peripheral and central vision. These and many other observations made it highly probable that the theory of Kries was correct—namely, that a division of function seemed to exist between the apparatus connected with rods and cones respectively. According to him the latter, the cones, formed a trichromatic apparatus—that is, one capable of distinguishing the spectral colours and requiring for its exercise higher intensities of light resulting in greater definiteness and clearness of perception. The rods, on the other hand, constituted an apparatus adapted for exercise of function at far lower intensities of light, with the natural drawback of being able only to distinguish between light and dark, and not between colours. Generally speaking it was the cones that were exercised in strong light and the rods in weak. Briefly summed up, this special kind of vision, or the function of the rods, is characterised by (1) its inability to distinguish colours; (2) a very pronounced sensibility for weakly illuminated objects; (3) a preference for rays of medium and short wave length; and (4) its total absence in the macula.

Dr. MCKENZIE DAVIDSON made a few introductory remarks as to the Method of Localisation of Foreign Bodies by the Roentgen Rays. He demonstrated the special application of the method for the detection, localisation, and estimation of size of foreign bodies in the eyeball and orbit. The patient was seated upright and his head fixed in a rectangular rest. The photographic plate was placed against the temple of the affected side behind cross wires. A lead wire was made to touch the edge of the lower eyelid opposite a known point on the eye and the patient fixed his eye on a distant object during the exposures. These were made in the same way as for other parts of the body and the interpretation of the skiagraphs was carried out by the use of the "cross-thread localiser."—Mr. TREACHER COLLINS then gave a description of four cases in which this method had been applied. In none of them could the presence of a foreign body be certainly determined from the clinical appearances. In two of the cases the chip of steel was subsequently withdrawn by the

introduction of an electro-magnet in the direction in which it had been ascertained to lie. The size of one of these bits of steel was practically the same as had been estimated previously to its removal. In another case, the eye being quiet and two and a half months having elapsed since the injury, operative procedure was not thought justifiable. In the remaining case, which was the first they had dealt with before they had obtained sufficient experience of the method, the foreign body was found to lie in the orbit when they thought it was lodged in the eyeball. Mr. Collins also mentioned three cases where the presence of a foreign body in the eye was suspected in which they had by means of the x rays been able to assure themselves none was there. In one of their patients, in whom a large number of exposures had been made, some loss of hair occurred a month afterwards from the temple which was directed nearest to the tube.

The following living and card specimens were shown:—

Mr. G. HARTRIDGE: (1) Foreign Body lodged in the Eyeball; (2) Rupture of the Choroid, with extensive Retinal Pigmentation, the result of a Severe Concussion of the Globe.

Mr. LAWFORD: Newly Developed Blood-vessels in the Optic Disc.

Mr. ROLSTON: Case of Keratitis.

Dr. POULETT WELLS: The result of Scraping the Calcareous Film of the Cornea.

OBSTETRICAL SOCIETY OF LONDON.

Exhibition of Specimens.—Annual Meeting.

A MEETING of this society was held on Feb. 2nd, Dr. CULLINGWORTH, President, being in the chair.

Dr. DAKIN exhibited a Uterus Ruptured during Unobstructed Labour (with a microscopic section).—Remarks were made by Dr. HANDFIELD JONES, Dr. JOHN PHILLIPS, Dr. CHAMPNEYS, and Dr. ILOTT.

Dr. DAKIN also exhibited a Uterine Fibroid clinically resembling sarcoma.—Remarks were made by Dr. CHAMPNEYS and Dr. GILES.

Dr. HANDFIELD JONES exhibited a specimen of Cancer of the Body of the Uterus removed by combined vaginal and abdominal section.

The annual general meeting of the society was then held. The report of the treasurer was read. On the motion of Dr. CHAMPNEYS, seconded by Dr. WALTER TATE, the following motion was carried: "That the audited report of the treasurer just read be received, adopted, and printed in the next volume of the Transactions and that the most cordial thanks of the society be accorded to Dr. Potter for his valuable services during his term of office."

It was proposed by Dr. HORROCKS and seconded by Dr. M. MCCANN that the following motion be put: "That the report of the honorary librarian (Dr. Griffith) be received, adopted, and printed in the Transactions." This was carried *nem. con.*

It was moved by Dr. WATT BLACK, and seconded by Dr. KEMPBY, and carried *nem. con.*: "That the report of the chairman of the Board for the Examination of Midwives (Dr. Boulton) be received, adopted, and printed in the Transactions."

The PRESIDENT then delivered his annual address.

It was moved by Mr. DORAN, seconded by Dr. POLLOCK, and carried with acclamation: "That the thanks of the meeting be given to Dr. Cullingworth for his most interesting address and that he be requested to allow it to be printed in the next volume of the Transactions."

Votes of thanks to the retiring Vice-President (Dr. Nesham) and members of the council and the retiring honorary secretary (Dr. Dakin) and honorary librarian (Dr. Griffith) were passed.

The following is a list of officers for the ensuing year:—President: Dr. Charles James Cullingworth. Vice-Presidents: Dr. William Duncan, Dr. John H. Galton, Dr. William Radford Dakin, and Dr. Jamieson Boyd Hurry. Treasurer: Dr. James Watt Black. Chairman of the Board for the Examination of Midwives: Dr. Percy Boulton. Honorary secretaries: Dr. John Phillips and Dr. Herbert R. Spencer. Honorary librarian: Dr. Amand Routh. Other members of the council: Dr. A. H. Freeland Barbour, Dr. John Walters, Mr. Joseph Thompson, Dr. George Francis Blacker, Dr. Arthur Nicholson, Mr. Richard Pinhorn, Dr. Thomas Watts Eden, Dr. John Dysart McCaw, Dr. Frederick John McCann, Mr. William Gandy, Mr George Henry Pedler, Dr. Augustus W. Addinsell, Dr. John Ford Anderson, Dr. Arthur Edward Giles, Dr. Angus Fraser, Dr. Harold A. des Vœux, Dr. Charles Hubert Roberts, and Dr. George Ernest Herman.

HUNTERIAN SOCIETY.

The Treatment of Constipation.—Stomach Disease.

AN ordinary meeting of this society was held at the London Institution on Jan. 26th, the President, Dr. G. E. HEBMAN, being in the chair.

Dr. HINGSTON FOX read a paper on the Treatment of Constipation. The condition is met with in two forms: (1) general or peristaltic constipation and (2) rectal constipation, or both forms may be present. The paper was concerned with the latter form only and its object was to point out that most cases begin from the neglect of the habit of periodic relief and that the impairment of the evacuant function of the rectum is the primary feature. The mechanism of defecation was described and the steps by which the act becomes gradually altered, less automatic and more voluntary in its character, and the rectum becomes no longer merely a passage and an evacuant, but a receptacle like the bowel above. The habitual use of aperients was discussed and opposed as unscientific, for the difficulty is in the lowest portion of the canal and is not properly met by stimulants directed to the bowel generally or to a large part of it. To regain the lost habit of rhythmic relief several practical rules were submitted. 1. Absolute regularity in the solicitation of the bowels twice daily—i.e., after breakfast and in the evening when fatigue often relaxes the tight sphincter. 2. Easy posture (Lauder Brunton); the use of a footstool helps. 3. Diversion of the mental attention. 4. In cases of difficulty, postponement of vesical relief until after breakfast so as to get simultaneous relaxation of both sphincters. 5. Removal of all local sources of irritation. 6 Occasional small enemata.—Dr. F. J. SMITH referred to the relief obtained in cases of piles by an action of the bowels nightly whereby venous congestion is obviated.—Mr. A. H. TUBBY inquired as to why a glycerine enema in some cases acts as an irritant and in other cases not and referred to the importance of peristaltic action.—Mr. COTMAN spoke of the remedies which act on the lower bowel.—Dr. ARTHUR DAVIES referred to the value of iron combined with aloes.—The PRESIDENT spoke of the practice of prehistoric man who swallowed much indigestible matter, such as seeds, vegetable fibre, bone, and gristle. Civilised man eliminated all indigestible matter and thereby removed natural aperients from his diet. He usually ordered in constipation brown bread, oatmeal porridge for breakfast, and fruit, such as figs, at night. He referred to the importance of habit as the true explanation of constipation, especially such as occurs in women.—Mr. BOWKETT referred to the value of taking large quantities of fluid.—Dr. FOX replied.

Dr. DAWSON read a paper on the Physical Signs of Stomach Disease and their Relations to Diagnosis and Treatment. He first referred to the methods employed by him: (1) inspection; (2) palpation; (3) splashing; (4) percussion and auscultatory percussion; (5) inflation; and (6) illumination, the last being of course used with caution in cases of ulcer. Taking functional disease of the stomach first of all, dilatation is more common in what is conveniently called chronic dyspepsia than is usually imagined and this knowledge is a help to treatment. In many cases of anæmia with dyspeptic symptoms there is pain after food, but the vomiting is not frequent and not emphatically related to food or pain; the treatment consists in iron and arsenic from the first with bismuth if necessary. In cases of chronic dyspepsia without anæmia, with sedentary habits and sometimes large ingestion of fluids, dilatation may be marked, and the sequence of events consists in loss of expulsive power, retention partly due to nervous insensitiveness, stagnation, putrefaction, and so further atony and dilatation. In such cases lavage is a necessity to be combined with electricity and massage and arsenic and alkalies. Taking the next group of cases with pyloric disease and consequent obstruction to the outlet due to such causes as carcinoma, cicatrisation of gastric ulcer, fibroid structure (syphilitic or otherwise), adhesions around the pylorus and pressure from without, it is found that in almost half the cases of pyloric cancer no tumour is felt and in such an accurate mapping out of the stomach wall is very valuable in helping to form a diagnosis. Dr.

Dawson quoted a case in illustration which had been diagnosed as cancer of the pylorus, but inflation and illumination showed that the tumour, though probably in the pyloric region, was outside the stomach wall and an operation showed it to be a healed gumma or hydatid adherent to the pylorus. Passing to the last group of cases—namely, organic disease of the gastric fundus—everyone will admit the great difficulties of diagnosis, which is often impossible without surgical exploration. In nineteen consecutive fatal cases, where a necropsy showed malignant disease of the fundus, no tumour was felt. In such cases an accurate mapping out of the stomach by means of inflation and illumination may definitely prove the tumour to be part of the stomach wall. The paper was illustrated by photographs of cases quoted.—Dr. F. J. SMITH thought that the suggestion that the gastric symptoms in anæmic girls were due to incipient dilatation was probably correct, and this explained the constant success of the administration of iron and arsenic in such cases irrespectively of a doubtful gastritis.—Mr. A. H. TUBBY quoted the views of some physiologists who considered the stomach as not being a digestive organ, but as one the acid secretion of which helped to prepare the way for the later digestive actions.—Dr. HINGSTON FOX alluded to the method of auscultatory percussion in mapping out the stomach as taught by Dr. Fenwick. He found dieting of great use and nitrate of silver valuable in such cases.—The PRESIDENT was struck with the confident tone of Dr. Dawson as to the inferences drawn from the methods of examination of the stomach as compared with the qualified opinion of Professor Ewald on such means.—Dr. RAWES referred to the enlargement of the stomach due to previous habits of life.—Dr. DAWSON replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

The Transmission and Dissemination of Cancer.

A MEETING of this society was held on Feb. 4th, Dr. H. P. POTTER, President, being in the chair.

Mr. C. A. BALLANCE introduced a discussion on the Transmission and Dissemination of Cancer. For a great number of years he had been working at the subject of cancer in conjunction with Mr. Shattock. He stated that he believed that the death-rate from cancer was on the increase. There were three main theories as to the origin of malignant tumours and possibly also of innocent ones: (1) spermatic, (2) embryonic, and (3) parasitic. Having briefly discussed the two first problems, he dwelt chiefly upon the third. He alluded to the writings of Sir James Paget, particularly instancing his statement that micro-parasites, or substances produced by them, will some day be found in essential relation with cancer and cancerous diseases. Mr. Ballance emphasised the facts that carcinoma sometimes has a purely local origin, giving as an example epithelioma of the lip, and that metastasis in carcinoma and sarcoma by lymphatics and blood-vessels is such as occurs in tuberculosis. He touched on the question of latency of carcinomatous deposits in lymphatic glands. He discussed auto-inoculation and the evidence for the transference of cancer from one animal only to another of the same species. Geographical distribution of cancer was dealt with and particular reference made to noted cancer homes and districts. The phenomena of atavism were noticed as were some other considerations. Mr. Ballance then proceeded to give a detailed account of the elaborate experiments conducted by Mr. Shattock and himself in order to discover the protozoic parasite although these experiments have been negative in their result. Infection experiments also met with the same unsuccessful ending. Further he alluded to the chemistry of carcinomatous growths, especially noting the facts that in cultures of pathogenic bacteria albumose was present, but in malignant growths none was found and that encapsulated protozoa had chitin or cellulose in their capsules, but neither substance was found in fresh scirrhous tumours. Dr. Brodie had kindly made this research. Mr. Ballance concluded by affirming that the doctrine of the parasitic origin of cancer recommends itself as bringing the essential pathology of malignant growths into natural relation with other diseases the parasitic pathology of which admits of scientific proof.

Mr. ALBAN DORAN congratulated Mr. Ballance on his work and paper. He alluded to the theory that organs which are subjected to irritation during devolution were apt to become the site of malignant disease. He further contrasted the operative procedures in carcinoma of the mamma and of the uterus; in neither did he think it was at all likely that all the lymphatic channels of metastasis were entirely removed. He referred to the subject of deciduoma malignum and asked for Mr. Ballance's opinion on the cause of it.

Dr. MCCANN showed a series of specimens illustrating the various forms of malignant disease of the uterus. He considered that heredity was an important factor in the causation of uterine carcinoma; so probably were gonorrhœa, septic processes and subinvolution after the menopause. He averred that uterine cancer was really a local carcinoma and that the cachexia seen in it was due to sepsis.

Dr. HERBERT SNOW doubted the parasitic origin of cancer. He considered there were great differences between it and the well-known parasitic diseases, such as leprosy and tuberculosis. He thought an autositic origin of cancer most probable. He did not think contagion in cancer other than very rare, but auto-inoculation was common. He greatly doubted whether geographical distribution was proved in the case of carcinoma but thought that heredity occurred in about 20 per cent. of the cases.

Some remarks were made by Dr. CHAPMAN, Mr. T. R. ATKINSON, who gave some interesting clinical experiences, and the PRESIDENT.

Mr. BALLANCE, in reply, suggested that deciduoma malignum might be analogous to those cases of acute traumatic malignancy with which surgeons were familiar.

LIVERPOOL MEDICAL INSTITUTION.

Coli cystitis.—Myxœdema.—Removal of the Tongue.—Operations for Dilated Stomach.

A MEETING of this society was held on Feb. 3rd, Dr. MACFIE CAMPBELL, President, being in the chair.

A vote of congratulation to Dr. McMurray on his election to the mayoralty of Bootle was proposed by the PRESIDENT, seconded by Mr. BANKS, and carried with acclamation. Dr. MCMURRAY thanked the members.

Dr. C. A. HILL read notes on Coli-cystitis which complicated a case of Enteric Fever in the second week occurring in a man aged fifty-five years. Bacteriologically the only organism present was the bacillus coli communis.—Dr. CARTER and Dr. HILL ABRAM spoke.

Dr. A. DAVIDSON read notes of a case of Myxœdema occurring in a woman aged fifty years. All the characteristic symptoms were present and no perceptible thyroid gland could be made out. This patient had been under the care of Dr. Davidson twenty-four years ago with marked exophthalmic goitre, photographs of her being shown.—Dr. CARTER thought it was not necessary to wait for atrophy of the thyroid body in order to get myxœdema. He instanced a case of a woman in which the two conditions were present in a very marked degree. He spoke highly of the good effect of hydrofluoric acid, the tumour having markedly reduced in size under its influence (neck measurement from 15 in. to 12 in.). The acid was continued and thyroid tabloids (5 grains) were prescribed; the myxœdema disappeared and none of the other symptoms were re-excited.

Mr. MITCHELL BANKS gave a brief outline of the various methods hitherto employed for the Removal of the Tongue in whole or in part, all of which he had tried with the exception of the thermo-cautery. In many serious cases where the disease was extensive and far back he had employed a preliminary laryngotomy which saved loss of blood and which notably prevented the septic pneumonia so fatal in tongue cases by avoiding the sucking of blood into the lungs during the operation. During the last few years he had made use of the semi-circular incision under the jaw which was first thought of by Regnoli fifty years ago. By this a remarkably free access to the diseased parts is obtained, so that the tissues may be quietly clipped with scissors down to the lingual arteries, which may be secured with an aneurysm needle and ligature before being cut at all. The whole proceeding can be effected without any bleeding into the throat at all; the blood runs outside the mouth, not into it. Again, if the incision is not quite closed a most admirable drain is obtained for the very offensive discharge which would otherwise accumulate in the floor of the mouth

and which does not get away well after the ordinary operations. Finally, the affected glands can be readily eradicated.

Mr. RUSHTON PARKER read a paper on a Series of Operations for Dilated Stomach. The paper was based on a series of seven cases explored or otherwise operated on for dilatation of the stomach. The first was in a woman, thirty-seven years of age, who had suffered from "indigestion" for many years and latterly symptoms of gastric ulcer, for which she had been in hospital for several months. The stomach was widely dilated and it was inferred that a contracted pylorus existed. At the operation in August, 1895, the pylorus was found to be contracted to the thickness of a cedar pencil outside measure. This was freely laid open and one of Mayo Robson's decalcified bone bobbins inserted, after which the widely separated sides of the incision were attached in their new attitude while the original ends were approximated, thus adding greatly to the width of the pylorus. The operation was performed by the method described and figured by Mr. Robson.[1] The patient made a quick and simple recovery, ate fish on the tenth day, and was well in a fortnight and reported herself on Feb. 3rd, 1898, as having been in excellent health ever since. The second case was that of a young man, aged twenty-two years, suffering from vomiting, dilatation of the stomach, and tumour in the region of the stomach. Exploration revealed a hard tumour close to the pylorus, thought to be malignant, and further operation was abandoned. He died soon after and the growth showed no evidences of malignant disease, leading Mr. Parker to regret not having at least performed pyloroplasty, which perhaps might have saved the patient's life. In the third and fifth cases the same symptoms attended by tumour existed; pyloroplasty was performed and a growth found close to but not implicating the pylorus. In both cases the immediate effects of the operation were good. Quick healing occurred and relief of symptoms, which only returned in one (a man, aged fifty-two years) after nine months and in the other (a woman, aged thirty-five years) after three months. Both are still living and the ultimate result is not yet settled. In a fourth case, in a man aged thirty-eight years, after similar symptoms pyloroplasty was performed and although locally all was healthy the patient died from inanition after four days. A sixth case, operated on only on Jan. 31st, 1898, under the same conditions was so far going on simply and well. In applying pyloroplasty to cases of carcinoma, the growth causing narrowing only of the pylorus by proximity in some cases and in others actually partly invading the tube, the principal object, after inspection, was temporary relief of the obstruction. This relief was so great in two cases and so enduring in one of them as to lead to the supposition that the growth was inflammatory rather than cancerous. Incidentally, then, the operations have been found of service in cases of dilated stomach owing to pyloric obstruction. The seventh case was one of gastric dilatation explored, with the discovery of a widely dilated pylorus. Nothing further was done, but all symptoms had ceased, the case apparently being one of abdominal ptosis.—Mr. PAUL referred to a case of supposed simple stricture in which the patient died from dissemination of cancer.—Dr. C. A. HILL referred to a case recorded where in idiopathic dilatation a large fold had been tucked in and the edges sutured.—Mr. BANKS having spoken, Mr. PARKER in his reply drew attention to the striking difference manifested after death in the growth in the two fatal cases as compared with the condition observed during the operation. In both cases a hard, distinctly prominent growth had become soft and level and on section showed great indistinctness of microscopical structure. This appeared to him to be due to post-mortem digestion. None of these tumours surrounded the pylorus and only in one, the last case, did he feel strongly inclined to perform pylorectomy. The conditions favourable to that proceeding seldom occurred, owing to the most important one, the strength of the patient, being wanting.

[1] Brit. Med. Jour., July 20th, 1895.

MANCHESTER MEDICAL SOCIETY.

General Peritonitis.—Suppurative Disease of the Frontal Sinuses.

A MEETING of this society was held on Feb. 2nd, Mr. G. A. WRIGHT, President, being in the chair.

The PRESIDENT gave an inaugural address entitled "Some Unsolved Problems, chiefly Surgical."

Dr. ARNOLD W. W. LEA read the notes of a case of General Peritonitis with Intestinal Obstruction the result of appendicitis. The patient, aged eighteen years, was taken ill with severe general abdominal pain and pyrexia. These symptoms continued for ten days. At the end of this time the abdomen became enormously distended and vomiting was incessant. When first seen the abdomen was much distended, resonant all over, and excessively tender. The bowels had not acted for five days and for twelve hours the vomiting had been fæcal. Rectal examination revealed a mass of exudation filling up the right side of the pelvis and continuous up to the pelvic brim. The general condition was good. The temperature was 101° F. and the pulse was 100. The abdomen was opened in the middle line. Sero-purulent fluid escaped freely and the coils of bowel were reddened and much distended. In the right iliac region numerous lesions were found. On separating the coils a large abscess was opened and over a pint of feculent-smelling pus evacuated. The abscess cavity filled the pelvis and in its outer wall close to the brim the appendix was felt. It was not removed. The cavity was flushed and a large drainage tube was inserted. Sutures were now placed in the centre of the abdominal wound to shut off the general peritoneal cavity from the abscess. The coils of intestine were extremely distended, so a loop of bowel was pulled out and punctured with a trocar; a pint or more of fluid fæces escaped. The wound in the bowel was closed by Lembert's sutures and the loop returned. Several collections of sero-purulent fluid were now discovered among the coils of bowel. Adhesions were broken down freely and strips of moist sterilised gauze were passed among the intestines in various directions. The patient stood the operation well. The vomiting ceased at once and flatus was passed within six hours. The next day the bowels acted freely. The case did perfectly well. The gauze was removed at the end of forty-eight hours and the tube at the end of a week as the abscess cavity rapidly closed. The patient is now (ten months after the operation) in excellent health and the appendix has caused no further trouble. General peritonitis secondary to appendicitis is in most cases rapidly fatal, but recently several successful cases have been recorded. The diagnosis of the cause of the peritonitis in this case was doubtful, inasmuch as there was at no time a localised swelling in the right iliac region or any dulness. In these cases the appendix hangs into the pelvis and rectal examination is of the highest value in making a diagnosis. The intestinal obstruction in this case appeared to be secondary to paralysis of the gut the result of bacterial invasion of the peritoneum. In the treatment the management of the distended bowel is of great importance. If nothing be done to relieve the tension obstruction is likely to continue and prove fatal. Puncture and drainage of the intestine relieve the over-distended coils of bowel and enable active peristalsis to again commence. In some cases even it may be advisable to make an incision in the wall of the bowel, allow the contents to drain away, and then suture. The gauze drains in the general peritoneal cavity are of great use in preventing any reaccumulation of fluid among the coils of bowel. They do not appear to cause any irritation and can be removed without difficulty.

Dr. MILLIGAN read a paper upon the Etiology and Treatment of Suppurative Disease of the Frontal Sinuses. The anatomical relation of the parts was first dealt with, special reference being made to the importance of the fronto-ethmoidal cells both scientifically and clinically. The occurrence also of the occasional continuation of the infundibular tract directly into the opening of the ostium maxillare was pointed out and its importance emphasised. Consideration was given in some detail to acute catarrhal and acute suppurative frontal sinusitis and various methods of treatment were mentioned. The etiology of latent empyema of the frontal sinus was next considered and the difficulty of its accurate diagnosis pointed out. Its co-existence also with suppurative disease of the ethmoidal labyrinth was detailed and the relation of this to subsequent treatment pointed out. With regard to its treatment it should be considered, both as regards operative and non-operative interference, intra-nasal and extra-nasal. The non-operative treatment was then reviewed—namely, the use of antiseptic lotions, syringing by means of a specially constructed cannula *per vias naturales*, pinning down redundant mucous membrane by means of an escharotic, the use of anti-streptococcic serum, and the employment of oxygen gas. The operative treatment was

next reviewed—namely, anterior turbinectomy (middle turbinated body) and the various methods of opening the sinus externally. A median incision was advocated and the importance of securing free fronto-nasal drainage was considered an absolute essential for a successful termination of the case. The various methods of dealing with the mucosa lining the frontal sinuses were then reviewed and Kuhnt's method was specially commended. Of fifteen cases which had been operated upon nine of the patients were males and six were females. In thirteen cases the sinusitis was unilateral, in two cases bilateral. In five cases the right sinus was affected, in twelve cases the left. In all the cases with the exception of one (a subacute case) other accessory sinuses were similarly involved, and a statistical review of the sinuses implicated was then mentioned.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society was held on Feb. 3rd, Dr. JAMES W. ALLAN, the President, being in the chair.

Mr. PARRY gave a demonstration on the following cases. 1. Cases of Hip-joint Disease and Psoas Abscess in the Early Stage. These were compared and their differential diagnosis considered. By causing abduction in disease of the hip the pelvis moved with the leg. In psoas abscess the pelvis did not move. This was made more apparent if two lines were drawn in crayon on the abdominal wall, (*a*) from the umbilicus to the symphysis pubis, and (*b*) transversely joining the anterior superior spines. Photographs to show this were distributed. Abdominal palpation comparing both sides would confirm a diagnosis of early psoas abscess. 2. Two successful cases of Kraske's operation. A preliminary colotomy greatly favours the success of this. (*a*) It allows of an exact diagnosis; the parts can be examined through the abdominal wound; (*b*) it relieves the patient at once; and (*c*) the surgeon gets a better command of parts below and a little time with change of air perhaps puts them in a more favourable condition for operation. 3. Cases of Acute Intestinal Obstruction. In such cases to be successful the operation should be made as short as possible. A rapid and methodical search should be made for the cause. A stream of warm salt solution, 60 grains to each pint, at a temperature of 100° F. should be kept playing over the parts exposed and used to irrigate the abdominal cavity; one or two pints may be allowed to remain in the cavity when closed. 4. Case of Diffuse Intra peritoneal Hæmorrhage following Rupture of Tubal Pregnancy. A small tear was found in the right tube which was ligatured and removed. Here salt solution was used, two pints being injected into the median basilic vein. 5. Case of Cerebral Abscess. Operation took place a fortnight ago, the patient recovering. There was a history of suppurative disease of the ear, headache, earache, and coma. The pulse was 60 and the temperature was 100°, but in these cases the temperature need not necessarily be high. There was dilatation of the right pupil. Operation took place through the mastoid cells which were full of pus. Improvement was gradual. 6. Case of Cholecystotomy. There was a history of recurring attacks of pain indicating gall-stones. There was no local sign. On exposing the gall-bladder an incision had to be made before the presence of gall-stones could be definitely ascertained. 7. Case of Perforation of the Stomach and Diffuse Purulent Peritonitis; operation; recovery.

Dr. DAVIDSON, Dr. ALEXANDER NAPIER, Dr. WATSON, the PRESIDENT, and others made remarks.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Laryngeal Necrosis in Enteric Fever.—Thyroid Extract in Goitre.

A MEETING of this section was held on Jan. 28th, Sir GEORGE F. DUFFEY, the President, being in the chair.

Sir GEORGE DUFFEY made a communication on Laryngeal Necrosis, an uncommon complication of enteric fever, based on a case that had been recently under his care in the City of Dublin Hospital. The patient was a delicate-looking labouring man, aged twenty-two years. His attack of fever was a very severe one characterised by a continuously high temperature, bronchitis, drowsiness, and great prostration. In the fifth week of his illness, when he appeared to be convalescing, he complained one morning, after a fit of coughing, of pain in his throat and difficulty of breathing. These symptoms were slightly relieved by treatment, but recurred next day in an aggravated form and accompanied with noisy stridor, hoarse and weak voice, slight dysphagia, and great prostration. The epiglottis was very dependent, but there was no obstruction to the entrance of air into the lungs. He died on the seventh day after the accession of the laryngeal symptoms—the forty-fourth day of his illness. Post-mortem examination showed typical typhoid ulceration in the ileum in process of cicatrisation with enlargement of the mesenteric glands and of the spleen. The larynx, which was exhibited, presented on its removal a small, dirty yellowish spot on the external and posterior surface of the plate of the cricoid. An incision through this spot opened a small abscess which contained about half a drachm of pus. The abscess cavity separated the swollen perichondrium from the underlying cartilage which was roughened and eroded. Sir George Duffey referred to a very similar case that he had reported seventeen years ago[1] and to the comparatively few cases of the kind occurring in Great Britain and Ireland.—Dr. E. H. BENNETT said that he had a considerable time ago published the case of a man who was seized with laryngeal perichondritis a fortnight after dismissal from hospital, where the case had run a protracted course of typhoid fever. Immediate tracheotomy was necessary to relieve dyspnœa. There was no suppuration. The tube could not be afterwards removed and the patient wore it for fourteen years, when he died from malignant disease. He (the speaker) had the specimen of a second case in which there was an abscess in the larynx following typhoid fever and in the abscess lay two pieces of necrotic cartilage.—Dr. J. MAGEE FINNY related a case where laryngeal complications occurred in a patient about nineteen years of age, a strong, healthy man. The condition being unrelieved by ordinary treatment tracheotomy had to be performed by Dr. Taylor. Recovery followed. The tube was removed in seventeen days.—Dr. A. R. PARSONS said that three years ago a patient of his, twenty-two years of age, had a moderately severe attack of typhoid fever and in convalescence complained of some difficulty in swallowing. On the following evening his temperature was 104° F. and he had severe dyspnœa, accompanied by well-marked laryngeal stridor. Sweating and cyanosis were present. Tracheotomy was immediately performed, but with little relief, and very soon emphysema occurred extending down to Poupart's ligament. Death ensued fourteen hours after the operation. Post-mortem examination showed extensive œdema of the epiglottis, enormous swelling of the arytenoids and ary-epiglottidean folds, with the formation of ulcers over the mucous surfaces. The ulcers were covered with something like a diphtheritic membrane, but more in the nature of slough, and no pus was present. Microscopic examination showed this whitish material to be swarming with cocci of various kinds.

Dr. RICHARD A. HAYES read notes of a case of Acute Goitre successfully treated by Thyroid Extract. The patient, who was present at the meeting, was a man, aged twenty-two years, and he applied at the Throat Department of the National Eye and Ear Infirmary on Oct 14th, 1897. He presented a soft goitre involving both lobes and isthmus, which he stated was of three weeks' duration only. His neck measured eighteen and a quarter inches over the tumour; his pulse was 84 and quiet. A loud systolic bruit and venous murmur were heard over the tumour, there was marked dyspnœa with loud inspiratory stridor on the least exertion or excitement, but the arytenoids moved outwards normally during quiet inspirations although in a jerky manner. There was no exophthalmos and the heart sounds were normal. Ten grains of iodide of potassium with ten minims of tincture of strophanthus were given thrice daily. After a week the tumour was almost unaltered, but the pulse-rate had gone up to 96. Five-grain tabloids of thyroid extract twice daily were then ordered and at the end of a week the dyspnœa and stridor had completely disappeared and the systolic bruit and venous hum could no longer be heard. The tumour had also somewhat decreased in size. The treatment was

[1] Dublin Journal of Medical Science, vol. lxxi., p. 555.

continued and on Dec. 16th, or two months after the patient was first seen, the goitre had almost quite gone, a slight enlargement of the left lobe alone remaining, the neck measuring sixteen inches. This case probably belonged to the exophthalmic variety of goitre. In forms of goitre other than exophthalmic Dr. Hayes has found the results of treatment by thyroid extract unsatisfactory, although several cases have been reported as cured and improved.—Surgeon-General POTTER said he had seen many cases of simple goitre when in India. The goitres, although extremely large, did not cause the slightest trouble to the person. The swelling in the neck generally went away after one application of biniodide of mercury.—Dr. A. R PARSONS asked if it was not possible for the enlargement of the thyroid gland to subside without thyroid extract as rapidly as it had come on.

Reviews and Notices of Books.

A Text-book of Physiology. By MICHAEL FOSTER, M.A. Cantab., M.D. Lond., LL.D. Glasg., F.R.S.; assisted by C. S. SHERRINGTON, M.A., M.D. Cantab., F.R.S. With illustrations. Seventh Edition, largely revised. Part III.—The Central Nervous System. London: Macmillan and Co. 1897. Price 10*s.* 6*d.*

THIS part of the seventh edition of Professor Foster's and Professor Sherrington's work is occupied with the consideration of the central nervous system and the nerves of motion and of common sensation connected with it, the special senses being reserved for another part. Professor Foster remarks in a brief preface that the progress of our knowledge in the short space of time that has elapsed since the appearance of the last edition in 1892 has been truly remarkable, rendering it requisite to re-write numerous paragraphs. This has been very thoroughly and conscientiously done. The result is an addition of about fifty pages and nine new diagrams. The chief additions that have been made are in the sections devoted to the consideration of the reflex actions of the cord and the morphology of the brain and cerebellum. The disposition and functions of the fasciculi of origin of the vagus, glosso-pharyngeal and spinal accessory nerves are considered, and a very minute account is given of the paths for the conduction of the visual, olfactory, and auditory sensations, together with the effects of stimulation of various parts of the cerebral cortex in reference to vision. The morphological constituents of the nervous system, and particularly of the cerebellum, are also described in detail by the light of recent observations, and the student will find all that is at present known in regard to nerve cells and their prolongations. The authors follow the views of Ramon y Cajal and Golgi in regard to the structure of the cell with its nucleus and protoplasm or pericaryon, its axon, and dendrites, but speak with great caution in regard to the relations that the terminal filaments of one cell bear to another cell. "So far as our present knowledge goes," they say, "we are led to think that the tip of a twig of the arborescence is not continuous with but merely in contact with the substance of the dendrite or cell body on which it impinges." They suggest that "such a special connexion of one nerve cell with another might be called a synapsis." No complaint can be made of the accuracy of the statements or the soundness of the views advanced in Professor Foster's work and the treatise is admirably adapted for those who are about to take up physiology as a pursuit in life, but it is becoming, if it has not already become, too bulky for the average medical student to master. Even if no additions are made to the fourth part few can afford the time and still fewer have the disposition to read through 1600 pages of a work which after all does not include the subject of development. A condensation of the "Text-book" limited in size to that of the first edition would prove very serviceable alike to the student and to the practitioner and we trust that Professor Foster will see his way to the publication of such a work.

Practical Diagnosis: The Use of Symptoms in the Diagnosis of Disease. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia, &c. Second edition, revised and enlarged. Illustrated with 200 Engravings and 13 Coloured Plates. London: Henry Kimpton. 1897. Pp. 605. Price 21*s.*

THE rapidity with which a second edition has followed the first in little over a year is the best possible proof of the success of this book. Dr. Amory Hare has the gift of making whatever he writes interesting and those unacquainted with his work could not have a better introduction than this volume. It will prove of most value to those recently qualified, but useful and suggestive to almost everyone. The general arrangement is to take the various parts of the body one after another and describe the abnormalities of signs and symptoms associated with each. Separate chapters are devoted to the Face and Head, Hands and Arms, Feet and Legs, and so on, with special chapters interpolated on subjects that need fuller treatment, such as Hemiplegia and Convulsions. The illustrations are well chosen and good in themselves. In the chapter on the Face and Head there are in close juxtaposition excellent figures of a mouth-breather with post-nasal growths, a cretin, an acromegalic, a patient with myxœdema, syphilitic ptosis, and exophthalmic goitre, with short, pithy descriptions of the conditions represented. The grouping is unlike that which is ordinarily employed and is therefore striking. In the chapter on the Hands and Arms there are some good photographs and skiagrams of gout and rheumatoid arthritis and progressive muscular atrophy. Dr. Hare's large clinical experience and knowledge of students come out well in the third chapter on the Feet and Legs, where the usual difficulties of the different forms of paralysis are made as clear as possible by good plates and tables.

In the chapter on the Tongue, Mouth, and Pharynx the coloured plates of various conditions of the tongue are rather poor and would prove practically useless. The description of the diseases of the eye is very full and good and the difficult subject of diplopia is well treated. There is a long and elaborate chapter on the skin, giving practically every abnormality met with, and good coloured diagrams are supplied of the skin areas corresponding to the different nerve roots as mapped out by Thorburn, Starr, and Head. The chapter on the Thorax and its Viscera could not be better done; it is everywhere obvious that the statements made are the result of careful thought and experience. The latest methods of diagnosis in abdominal disease, "the gastrodiaphane of Einhorn," and Törck's gyromele all find their proper place. There is a good clinical account of the abnormalities of blood and urine, of forms of vomiting, and types of sputa. The index, forty-six pages in length, is excellent. Dr. Hare is to be congratulated on having written a most stimulating and suggestive book.

The Mystery and Romance of Alchemy and Pharmacy. By C. J. S. THOMPSON. London: The Scientific Press, Limited, 28-29, Southampton-street, Strand. 1897. Price 5*s.*

"THE history of the past, whether in science or in art, is always worthy of study and attention." With this prefatory statement most readers will agree, but we do not think that the students, at any rate, of medical science "are apt to overlook and lose sight of the patient labours of the early pioneers of science, many of whom laid the foundation of discoveries that have since proved of inestimable

value to mankind." Despite the enormous advances made in recent years in medicine and therapeutics there is still much that is empirical in treatment and many of these empirical methods may be traced a long way back. Paracelsus is said to have been the first to use mercury internally, as the author points out; Van Helmont used alum in uterine hæmorrhage; the Arab physicians advised the use of senna, tamarinds, and cassia (page 107) in place of the violent purgatives of the Greek physicians; and Thomas Dover, the originator of Dover's powder, was born in England in 1660. In the interesting chapter on Surgery in the Middle Ages Mr. Thompson quotes how water was tested and how disinfection was attempted during the fifth (*sic*) crusade. In this crusade St. Louis of France was accompanied by his private physician, Dudon, and other leeches; among them was a lady doctor, or *physicienne*, named Hernandis, who probably attended the Queen in her confinement, which took place at Damietta. The expedition suffered terribly from scurvy, typhus fever, and other pestilences. The part played by water in the diffusion of disease would seem to have been recognised, though the methods of water examination, observes the author, would hardly satisfy a modern chemist. A piece of white linen was dipped in the water to be tested and then dried; if there were any stains on the linen the water was condemned, but if not it was pronounced pure. The addition of four crushed almonds or beans was believed to make the water of the Nile safe for drinking. The method of disinfection adopted for the King's tent was to fumigate it with a mixture of amber, chick-peas, or lupine, previously macerated in wine and then placed on live charcoal. In the sixth crusade, says Mr. Thompson, which took place twenty-two years later, vast numbers, including St. Louis himself, fell victims to ignorance of the elements of sanitation. Mr. Thompson's history is somewhat erratic. St. Louis was not born at the time of the fifth crusade. He led the seventh and eighth crusades and died during the latter. Apart from these slips the book is well worth reading as a record of curiosities connected with the evolution of chemistry, medicine, and pharmacy. It records also the superstitions that were held in olden time in regard to healing. Thus there are chapters on amulets, talismans, and charms, the philosopher's stone, witchcraft, plant lore, mummies, &c. In Part II. the eleven chapters relate to alchemy and pharmacy referred to in literature. The list commences with Chaucer and Shakespeare and ends with Dickens, Thackeray, and Marryatt. The book consists, indeed, of a very quaint and historical record of facts which all students of medicine will read with the greatest interest. Mr. Thompson has evidently been at some pains to collect his materials and his book will save those who follow this subject much trouble in seeking the various archaic tomes from which he has drawn his information.

Report of an Investigation of the Epidemic of Malarial Fever of Assam, or Kala-azar. By LEONARD ROGERS, M.B., B.S. Lond., F.R.C.S. Eng., Surgeon-Captain, Indian Medical Service. Shillong: Printed at the Assam Secretariat Printing Office. 1897.

THIS report, into which a large amount of matter has been compressed, is of an exhaustive nature and it is illustrated by numerous charts and plates. The origin, nature, and spread of the disease known as *kála ázar* in Assam and the Garo Hills district has excited a good deal of attention and, we may add, of contention and has been frequently alluded to in the annual sanitary reports of Assam. The facts connected with the prevalence, spread, and pathological nature of the disease were investigated by Surgeon-Major Giles, who came to the conclusion that although cases of malarial cachexia were very common in the affected districts the increased mortality of the pestilence was attributable to its parasitic nature and that kála-ázar was really an ankylostomiasis. This view was also supported by some other observers. On the other hand, grave doubts having soon arisen as to the accuracy and soundness of this opinion, more especially owing to the excellent observations of Surgeon-Major Dobson, it was determined to submit the whole question to re-investigation. The result is the exhaustive and ably argued report before us, wherein the reasons are fully set forth on which it was concluded that the epidemic sickness in Assam known as kalá-ázar is from first to last a very severe form of malarial fever. This is supposed to have originated in an intensification of the ordinary malarial fever in the Rungpore district in the early "seventies" by a succession of unhealthy seasons, to have thereby acquired infective properties, and to have spread slowly during the last twenty years up the Assam Valley, having found in the districts it had traversed a suitable soil for its propagation. The way in which the subject is worked out is interesting and ingenious, and a number of points connected with the history of malaria are touched upon in the inquiry, but it would occupy too much space for us to deal with these in detail. That a malaria generated in one place may occasionally become epidemic and overflow the geographical limits of its production and so become spread over considerable areas is probable enough from what we know of what happened in the history of the Burdwan fever. Surgeon-Captain Rogers goes, however, a step further than this and boldly advances the view that under certain circumstances it may become communicable, and the germs of the disease may pass from one person to another, either directly or indirectly through the soil. But it will, we suspect, require a good deal more evidence than he has adduced before this view is generally accepted. The clinical and histological features of kála-ázar are apparently those of a severe and cachectic variety of malarial fever, but whether there is any specific form of micro-organism superadded to that found in malaria has not yet been determined. Kála-ázar possesses, however, many points which apparently differentiate it from ordinary malarial fever. The author's report on malarial fever and kála-ázar at Assam, if judged from the standpoint of scientific investigation, strikes us as well done, and he mainly bases his recommendations for checking the spread of this particular form of disease on the conclusions which he has been led to form as to its nature and pathology. These should not of course be neglected, and we regard his proposal to evacuate an affected area and take up new ground even in its near vicinity as likely to be productive of good. We also commend his practical suggestion regarding the publication and distribution of a pamphlet translated into Assamese, Karachi, and other languages. Looking, however, at the general conditions affecting the low-caste native population of Assam it cannot cause any surprise that there is a large amount of sickness among them. The natives are, as a rule, miserably poor, half-starved, badly clothed and lodged, and as a consequence constitutionally feeble. Their environing conditions and unhygienic habits are in other respects also the reverse of sanitary. This being so we suspect that from a sanitary or practical policy point of view attempts at checking the spread of any particular disease will not be productive of great benefit to the public health if unaccompanied by efforts to improve the general conditions affecting the native population.

LIBRARY TABLE.

The Commercial Uses of Coal Gas. By T. FLETCHER, F.C. Warrington: Fletcher, Russell, and Co., Thynne-street.—Mr. Fletcher's name is well known in connexion with a great number of gas appliances. Of the introduction of gas

for heating purposes in industrial operations he is probably the pioneer. He has designed a great number of ingenious apparatus in which gas may be employed as fuel for a great number of applications. The little volume before us is full of practical hints as to the uses of gas appliances and how best to employ them. In one paragraph the author describes the use of coal gas to the burglar. He says that with a small cylinder of compressed gas and one of oxygen it is possible by means of a small blow-pipe to penetrate the hardest drill-proof steel plates. In this way safes made of the hardest drill-proof steel, if not over half an inch in thickness, can be fused with the greatest ease. Safe-makers know this, he adds, and the best safes are now made of plates which are too thick for the blow-pipes to deal with. The application of such a formidable tool is, however, of the greatest value in "brazing up" leaks and making repairs in pipes and the fittings of engines without taking them apart. We quite agree with Mr. Fletcher that the products of complete combustion of coal gas are practically without injury to health *so long as they are complete*. As we have already shown[1] the amount of carbonic acid produced in the combustion of coal gas is quite insignificant compared with that exhaled by the human individual. Of the two the human exhalation is much more prejudicial to health.

Introduction to the Study of Organic Chemistry. By JOHN WADE, B.Sc. Lond., Senior Demonstrator of Chemistry and Physics at Guy's Hospital. London: Swan Sonnenschein and Co., Limited. 1898. Price *7s. 6d.*—The author in his preface states: "This book is intended as a guide to students commencing organic chemistry." There are certainly many excellent features about the book, but few which appear to bear out the opening sentence of the preface. In Chapters XII. and XIII. a very clear exposition of structural formulæ is given, but these chapters are respectively followed by very complicated charts dealing with the relation of the different groups; these are found all through the work, they are not at all easily made out and will certainly not tend to improve the reader's conception of organic formulæ. Again, the portion of the book dealing with stereo-isomerism and the placing of the consideration of the formula for benzene until after the simpler compounds have been dealt with are distinctly good features, as also is the addition of laboratory notes, only here the author has been led into too abbreviated a manner. He certainly calls them notes, but would five lines on the preparation of the important substance ethylene dibromide enable a first M.B. student to prepare the compound? We do not notice any errors in the text. As a work of reference the book will be a useful addition to scientific libraries.

A Doctor of the Old School. By IAN MACLAREN. London: Hodder and Stoughton. Price *2s. 6d.*—A new edition, very prettily got up, with illustrations by Fred. C. Gordon. This book is so well known that it is unnecessary to say more than that we recommended every one to read it on its first appearance and we see no reason for altering our opinion.

Chambers's Algebra for Schools. By WILLIAM THOMSON, M.A., B.Sc., F.R.S. Edin. London and Edinburgh: W. & R. Chambers. 1898. Pp. 560. Price *4s. 6d.*—Although there is no obvious reason why a treatise on algebra should be sent to THE LANCET for review we may state that the present work is an excellent one of its kind, all the usual processes being clearly explained and copiously illustrated with examples the answers to which are given at the end of the book. The construction of geometrical loci from indeterminate equations is shown, a method which often helps to fix the attention of a pupil and gives him some notion of coördinate geometry. Less space, however, might have been devoted to cubics and equations of higher degrees, for these expressions cannot be adequately dealt with before the theory of equations and imaginary roots has been read and when general methods are available it is hardly scientific to encourage beginners to use special artifices for arriving at partial solutions.

A Manual of Mental Science for Teachers and Students. By JESSIE A. FOWLER. London: L. N. Fowler and Co. New York: Fowler and Wells Co. Pp. 235. Price *4s.*—Notwithstanding its comprehensive title this book, which is dedicated to the Chairman of the London School Board and the President of the Board of Education, New York, seems to aim chiefly at the teaching of phrenology to children. The illustrations include a phrenological chart of the head, photo-prints of brains and skulls, and upwards of forty portraits from photographs of children, some of them extremely young, who were considered to exhibit the various phrenological characteristics. Destructiveness, for instance, is represented by an infant of eight and a half months and combativeness by a little girl in a short frock. Each of these forecasts might be justified almost as soon as it was made, but surely the author is anticipating too much when she gives the likeness of a boy of eight years as an example of conjugality (p. 164). The description of the various regions of the brain and the glossary which is added at the end of the book are useful features.

The Latest Fruit is the Ripest. By F. J. GANT, F.R.C.S.Eng. London: Digby, Long, and Co.—This book is in part a sequel to the "Perfect Womanhood" by the same author which was reviewed in THE LANCET of Oct. 26th, 1895, and the sequel is worthy of its forerunner. The second part of the book is mainly an autobiography of the author. From this we learn that Mr. Gant was born in 1825 in a house in the Kingsland-road, but early in his life his parents removed to Eastbourne, a change of *milieu* to which Mr. Gant attributes the preservation of his life. Here he went to school where the usher seems to have been as ushers mostly were in those days, a veritable Orbilius. Afterwards he lived at Hastings, and at the age of thirteen years commenced his education at King's College, London, passing from thence to University College, London. In 1859 he married. Mr. Gant reminds his readers of the foundation of the London School of Medicine for Women, founded in connexion with the Royal Free Hospital, of which he has been for so many years a surgical officer. Mr. Gant is too upright and honourable not to give the women students every credit for their success; albeit, he candidly confesses that he was not in sympathy with the movement for their admission.

BRISTOL BOARD OF GUARDIANS.—The guardians of the Barton Regis (Bristol) Union pay the Bristol board of guardians *15s.* weekly for the maintenance and treatment of infectious cases belonging to them that are sent by them to the Stapleton Workhouse, *12s.* of this sum being for maintenance of the patients and *3s.* for remuneration of the officers for their extra services in connexion with the cases. During the past two years this latter sum had reached nearly £60 and at the last meeting of the Bristol board of guardians held on Feb. 4th it was resolved, subject to the sanction of the Local Government Board, to divide that sum amongst the officers and nurses, Mr. Robert Norgate, the resident medical officer, being awarded £30.

HEALTH OF TORQUAY.—At the meeting of the Torquay Town Council held on Feb. 1st the medical officer of health presented his annual report for 1897. The births had been 461, equal to a rate of 18 per 1000, which was the smallest return for the past twenty years. The deaths were 383, or 15 per 1000, which was the lowest death-rate for some years; excluding 77 cases entered as visitors the rate would be 12 per 1000; 11 deaths were due to zymotic diseases, equal to a rate of 0·43 per 1000; 18 cases of typhoid fever had been notified, 4 of which were imported, and of these latter no less than 3 had a fatal termination.

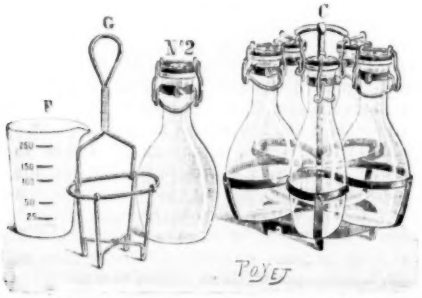
[1] THE LANCET Special Analytical and Sanitary Commission on the Incandescent System of Gas Lighting, THE LANCET, Jan. 5th, 1895.

New Inventions.

THE "TUTÉLAIRE" APPARATUS FOR PASTEURISING MILK AND TEAT.

THE simplification of a method whereby the purity and freedom from hurtful organisms of milk are ensured must commend itself to all those concerned in the supply of healthy food to the infant. Milk is not only known as a carrier of actual disease, but it may also contain impurities which may seriously disturb the delicate digestive functions of the class for whom it is essentially the diet. The "Tutélaire" apparatus is designed for "pasteurising" rather than sterilising milk. Sterilisation at a temperature of 212° F. does undoubtedly produce profound changes in the character of the milk. Milk thus treated cannot at any rate be said to possess physically or physiolcgically the same properties as milk when freshly drawn from the breast. The "Tutélaire" process is quite simple. The apparatus consists of a large metal container or bath provided with a thermometer, a cruet-stand holding bottles provided with specially constructed stoppers, a graduated glass measure, a lifter, and a warming tin. In Fig. 1 the metal bath and the warming

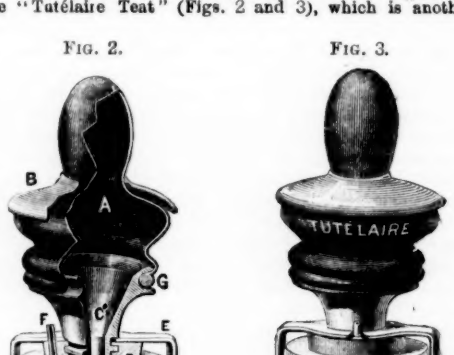
FIG. 1.



Showing graduated measure (F), lifter (G), separate bottle (No. 2), and stand (C).

tin are not shown. The milk is first measured into a measuring-glass (F), 150 c.c. being suitable for the child in its early infancy and 250 c.c. when the child is ready for weaning. The bottles, as seen at No. 2 and C, are secured by a patent spring stopper of a form which resembles the pattern now being largely introduced for bottles containing pasteurised lager beer. After the bottles have had the required quantity of milk measured into them they are placed (after the stoppers have been secured) in position in a pail of cold water. After a few minutes they are taken out and shaken so as to ensure uniformity of composition and then placed in the cruet-like stand (G). The bottles are then put in the metal bath, which should contain about a pint of water. Previously to this the spring of the stopper is gently released without shifting the cork itself, so that while it allows for expansion during the heating process it closes automatically and effectually on the contents being cooled. The bath is then placed over a fire or gas stove until the proper temperature as shown by the thermometer is reached. As soon as the temperature has arrived at the correct point the lid is removed and the steam allowed to escape for a moment and the stand containing the bottles is lifted out, after which the spring of the stopper is carefully replaced. The bottles are then plunged into cold water where they should be left until required. It is advisable just before using a bottle to warm it, which can be done by means of a small boiler provided with the apparatus and then shaking. The "Tutélaire" apparatus supplies a very distinct and important want and fulfils very satisfactorily, according to our experiments, those conditions under which milk, required for infant feeding and free from injurious tendencies, may be prepared. Bacteriological experiments are scarcely necessary to prove the efficiency of the apparatus, since we found that by its means milk can be kept indefinitely without any undesirable change in composition taking place or any notable deterioration in regard to taste. Further, this satisfactory result is obtained in spite of exposing the milk thus "pasteurised" to blood-heat temperature for some time, a condition which, as is well known, readily fosters objectionable changes in milk that contains organised impurities. The "Tutélaire" apparatus was designed by M. Louis Contant, who obtained a prize of 5000 francs in an open competition in France instituted by *Le Journal* in 1896, and who was also awarded the grand prize at the Paris National Exhibition, 1897. Mr. James J. Hicks, of 8, 9, and 10, Hatton-garden, E.C., is the sole agent for the apparatus in this country. The same gentleman is also agent for the "Tutélaire Teat" (Figs. 2 and 3), which is another

FIG. 2. FIG. 3.



Tutélaire teat in section (Fig. 2) and elevation (Fig 3).

useful introduction by M. Louis Contant. It is designed so as to approach as nearly as possible the human teat. As will be seen from the accompanying illustration, it consists of an ordinary sucking-piece provided with a shield (B) overlapping a small rubber reservoir (A) which is readily yielding. In other words the sucking-piece represents the human nipple and the hollow rubber cushion beneath the breast. The arrangement is attached firmly to the bottle by means of a rubber cork (D) and metal clasp (E). The cork is provided with a perforation which is fitted with a tube of fine bore (F). On inverting the bottle filled with milk a small quantity of air enters. When this ingress of air ceases the nipple is full of milk. The entire teat is a very ingeniously constructed arrangement and does completely away with most of the manifold sources of objection pertaining to ordinary feeding bottles.

AN IMPROVED RETINOSCOPE.

HAVING a large number of patients to retinoscope daily I have found the instrument described below of great service. It consists of an ordinary spectacle frame, which must be accurately centred for each user, fitted on one side with a concave mirror having a central aperture of 5 mm. in diameter; the other side is empty, the mirror being before that eye which the oculist is accustomed to retinoscope with. By very slight lateral, vertical, or oblique movements of the head the various movements of the shadow are obtained. This instrument has the advantage of leaving both hands free, which facilitates the rapid removal and insertion of lenses in the trial frame as well as the controlling of young, restless children. The light is on the patient's eye immediately it is looked at by the uncovered eye. The rapidity of the movement of the shadow can, I believe, be better appreciated. The instrument has been made for me by Messrs. Curry and Paxton, London.

AUBREY JELLY, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.,
Royal South London Ophthalmic Hospital.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 12, 1898.

THE nationalities of southern Europe, particularly the Italian, are year by year becoming more cognisant of the fact that physically they are proving less and less a match for the northern races and that even if intellectually their inferiority is not so marked they can turn their mental gifts to less account than their northern contemporaries for the very lack of that energy which physical strength supplies. Even in France there is a confession to the same effect and last summer M. EDMOND DESMOLINS startled, if he did not shock, his compatriots by the prospect he held before them of being everywhere elbowed out or trodden down in the struggle for existence by the Anglo-Saxon civilisation. "A Quoi tient la Supériorité des Anglo-Saxons?" was the title of his book and the impression it made in Italy was hardly less profound than that which it left on France. The subject, so started, has evoked many interesting contributions to its discussion; but of all yet given to the world the most temperate, the most scientific, and the most conclusive is that of the Professor of Physiology in the University of Turin, Dr. ANGELO MOSSO. He takes his text from the brilliant book of Signor GUGLIELMO FERRERO, "L'Amore nella Civiltà Latina e Germanica," and cites one of its most pregnant passages on which to hang his discourse. "The Englishman and the Scandinavian," says FERRERO, "are sexually less precocious and cooler-blooded than the Frenchman or the Spaniard, and in this organic difference lies the root of nearly all the other psychical differences of the two races, northern and southern." Not accepting this thesis absolutely Dr. MOSSO interprets it with considerable modifications which seem to us scientifically well-founded. "Life," he admits, "develops more intensely, more rapidly in southern latitudes. In India the female becomes a mother at thirteen; with us in Italy she may become so at fifteen; in the people of the north at eighteen. As nothing happens in one sex which has not a 'harmonic correspondence' in the other, so we may say that the youths of the Latin race are made men two or three years before the youths of the north." This, he proceeds to show, does not constitute a physiological inferiority because the strength of muscles and the brain power reach the normal degree of energy with manhood. "The bones continue to grow, but the development of the fundamental organs is completed only when the individual can give origin to another being." It is precisely here that Dr. MOSSO lays his finger on the fatal weakness in the upbringing of his compatriot youth—an upbringing which, taking no account of racial and physiological characteristics, models itself on that of other and differently constituted nationalities, forfeiting thereby the advantages native to the compatriot constitution without gaining anything from adherin to the foreign exemplar. A little recent history illustrates his meaning.

The crushing defeat sustained by France in 1870-71 raised not only for Frenchmen but for Italians and, indeed, for the whole Latin civilisation the question: to what was attributable the superiority of the victorious race? Man for man, it was said, the German is robuster in body and mind than the Frenchman or Italian. How is this explained? "Education" was the unanimous answer. MOMMSEN'S saying that the victories of 1870-71 were won at the universities was taken seriously to heart; and so legislation, as soon as practicable, sought in both Latin countries to bring up youth as much as possible on the German model at school and college. The centralised educational authority in Italy as well as in France made it easy to impose the exotic system in either country, and after more than a quarter of a century's trial the results have been not only disappointing but disastrous. The Italian experience, indeed, has been more of a failure than the French, and that, too, because the people are more purely Latin and are less well provided with the counteracting forces which superior wealth and comfort can bring. The precocity which FERRERO and MOSSO alike admit was not recognised in the educational reforms and whereas physical exercise should have taken precedence of intellectual the converse became the rule. At an age when the boy, or rather child, should have been inflating his lungs and developing his muscles in the open air, with but a moiety of time reserved for school attendance, he was kept to his desk the best part of the day within doors painfully conning the task on which he was afterwards to be examined, orally or in writing, in the same confined atmosphere. When precious years had been spent in this unhealthiest of routines his pale looks and flaccid muscles were thought ripe for the physical exercise that would give them glow and vigour, and the gymnastics of the Turnverein, or the nearest Italian equivalent, were imposed on him generally at the close of the day and invariably in an indoor atmosphere. Every influence, in fact, that could stimulate the "precocity" indicated by S'gnor FERRERO and blunt its natural correctives had full play on the Italian youth, and the results as given by Dr. MOSSO are such as make him tremble for his country's future. Let us quote the testimony of Dr. R. LIVI, of the Army Medical Department, as to the results of the system in that section of the community which with us, for example, turns out the most fully and fairly developed specimens of ingenuous youth. "The rejections for insufficiency of thoracic girth increase year by year and notably among the student class." "La ristrettezza del torace è una diretta conseguenza dello scarso esercizio muscolare, della vita sedentaria, del soggiorno molto prolungato in ambienti chiusi" (the narrowness of the chest is a direct consequence of the scanty muscular exercises, of the sedentary life, of the greatly prolonged sojourn in confined atmospheres). True of the young man, this physical degeneration is not less true of the young woman, of whom Dr. MOSSO says: "The abuse and excess of school-work is like a fatal ivy suffocating the organism of the female, saddening her existence, drying up the well-springs of life." Sexual precocity, a channel

of enervating indulgence for the southern, is morbidly encouraged by this mode of life, while the body is weakened in the apparent interests of the mind, which, in turn, is itself impaired by the unnatural methods to which it has to conform; and the result is seen in that "effeminatezza" which increases in contemporary France, and especially in Italy, and places both countries at a disadvantage, becoming year by year more visible, with the northern races. Correct all this, however, says Dr. MOSSO, by abandoning our exotic educational system and by returning to the model imported into ancient Italy from Greece, and in another generation it will be seen that the "effeminatezza" now causing so much concern is not a "vizio Latino costitutivo ed organico" (a Latin vice constitutional and organic), but a defect of education of which the origin can be traced and for which the remedy is at hand.

Not Germany, but Great Britain, contends Dr. MOSSO, presents the model which Italy ought to follow; and why? Because more than any other nation the English have reproduced the old Greek ideal of the harmonious, the concurrent exercise and development of body and mind. Here his colleague and brother reformer Signor FERRERO and he are quite at one, Signor FERRERO indulging in an enthusiastic eulogy of the open-air athletics of Oxford and Cambridge and of the great public schools which prepare for them. The sexual precocity on which he is so eloquent as conducing to "Latin effeminacy" finds no such corrective as the muscular hardening and the purified circulation gained from the cricket-field, the football ground, and the river. In this Dr. MOSSO agrees with him and, admitting that Italian youth do not take kindly to outdoor games or, indeed, to physical exertion of any kind, he would yet introduce the English custom among them, confident that ere long they would become as enamoured of it as their ancestors were of the exercises imported from ancient Hellas. The bodily physique once rehabilitated intellectual food of all kinds would have a better chance of being healthily assimilated. Study would be more valued and practically appreciated by not encroaching on other interests and academic qualification would be all the more sound and satisfactory if for the "demonstrations" and college disturbances in which it finds so frequent an outlet for its energies Young Italy would substitute inter-university sports — "SYBARIS pulling stroke in a regatta on the Tiber and GYGES winning the honours of a goal in a football match in the Colosseum!"

IT has been too well proved that the mere possession of a university degree is no guarantee of spotless behaviour in the graduate. On the principle of *noblesse oblige* we are entitled to expect a high standard of professional conduct from those who possess degrees, but common observation and the records of the General Medical Council show that such expectation is often disappointed. A late President of the General Medical Council, Mr. JOHN MARSHALL, among the other admirable work which he did for the Council, presented in the year 1888 a memorandum on the disciplinary powers of the qualifying bodies, showing in what a chaotic state the disciplinary function was, that it existed pretty efficiently in some of the corporations and was almost non-existent in others, and that in the universities it was still less effective and in some cases altogether absent.[1] He showed that in the Scottish universities and in the Durham and Victoria universities, and even in the University of Cambridge, there was no power to degrade even a convicted or imprisoned criminal. The General Medical Council might see fit to remove his name from the Medical Register, but the universities mentioned could not withdraw his degrees. This state of matters was felt by the profession and by the General Medical Council to be well-nigh intolerable, the more so as it left the offender whose name had been removed from the Medical Register in possession of the qualification which gave him his most distinctive title and, in the opinion of some persons—even persons of authority—a kind of excuse for continuing to practise, if not a sort of qualification entitling him to do so. The records of the General Medical Council show that graduates have formed a material part of the whole number of persons who have been removed from the Register by the penal action of the Council. There was therefore no excuse for the universities affecting to believe that their graduates were necessarily above the need of any disciplinary control or any penal action on the part of their *alma mater*. But although Mr. MARSHALL brought this unsatisfactory state of matters to light so long ago as 1888 and 1889 the subject was allowed to sleep till the year 1895, when, on the motion of Dr. GLOVER, seconded by Dr. (now Sir RICHARD) THORNE, the Executive Committee of the General Medical Council was instructed to revert to the consideration of the subject as it had been left by Mr. MARSHALL. Since then it has received considerable attention from the present PRESIDENT of the Council and from the Executive Committee as well as from a sub-committee of the Executive Committee, and it is gratifying to observe that the universities themselves whose disciplinary or penal powers were *nil* have begun to show a much more worthy interest in the subject. Two of them in particular have taken pains to acquire the means of removing from their list of graduates persons who have proved themselves unworthy to be on such lists and to withdraw their degrees. The University of Cambridge set a good example to the other universities that were helpless in respect of ridding themselves of discreditable graduates by preparing a disciplinary statute to deprive of his degree any graduate sentenced to imprisonment. The statute was soon approved by HER MAJESTY in Council and has since been acted on. The University of Durham and, we believe, the University of Victoria followed the example of the University of Cambridge and sought powers so obviously needed.

The newspapers have just shown us that the University of Durham has not only acquired such powers but has used them. The *Newcastle Chronicle* of Feb. 2nd reports as taking place at the University of Durham on the preceding day what it calls a singular and rarely executed ceremony—"that of revoking the degrees of LEWIS LAMB BAILES, upon whom the degrees of Master in Arts, Bachelor of Medicine and Bachelor of Surgery, and the title of

[1] Minutes of the Medical Council, vol. xxv., 1888, appendix 3. Memorandum on the Disciplinary or Penal Powers of the Qualifying Medical Authorities and of the Medical Council as regards Erasure of Qualification and Names from the Medical Register.

Associate in Science had been conferred," on the ground that at the preceding assizes he had been convicted of a crime and sentenced to penal servitude. It is no doubt lamentable that one who had been so honoured by a university should have to be degraded by the same authority. But it is obvious that both powers should reside in the same body. This seems right in respect of all the faculties. Graduates in arts or science or in any other faculty have the right to expect their *alma mater* to purge the list of graduates of unworthy members. In the case of graduates of medicine there are special reasons why the university authorities should have and should exercise such powers. For such graduates are in virtue of their degrees entitled to practise medicine and bound to observe all its obvious and its traditional standards of conduct. But we do not agree with those who think that other graduates may commit crime with impunity and still retain their university *status*. We are glad, therefore, to notice that the new Charter of the University of Durham gives the power, as in this case, to revoke "any degree or title that has been conferred." It is gratifying to know that the Scottish universities no longer refuse to take steps to vindicate their own honour in this question. It is to be hoped that the General Medical Council will prosecute its investigations into this subject with vigour. At present the investigation is only begun. The powers recently acquired by the universities only apply to great crimes. There are all sorts of differences in the disciplinary powers of the corporations, including the power of re-instatement, which threaten to impair the authority of the General Medical Council itself and call for its serious attention.

HAS influenza become endemic to this country? That is a question which is forced on the mind by the seasonal exacerbation of the disease which has really never left us since the land was swept by the great pandemic waves of 1889–92. Ever since those memorable years when the characters of this remarkable affection and its protean sequelæ were made familiar to hosts of victims and to the hard-worked members of our profession it cannot be said that influenza has been wholly absent. To be sure during the summer months cases are few and far between, but almost invariably with the approach of winter they multiply in number and serve to swell the death-rate. Nor is it possible to afford a satisfactory explanation of this recrudescence of an infective disorder that seems to obey no law, but to arise with a capriciousness that defies generalisation. Does it recur because of certain favourable conditions of soil or atmosphere? If so, why does it prevail in times and places in which these conditions are so diverse? The mild yet comparatively dry season through which we have been passing this winter has been characterised by recurrence of the disease in certain localities; but when we recall the concomitants of the more widely spread outbreaks we are unable to connect the type of season with the prevalence of the malady. Nor is it easy, in the lack of any system of notification, to determine to what extent influenza prevails at the present time. That it does prevail and that to a notable extent is apparent from the death returns and from the statements of practitioners in certain districts where the "green Yule" seems to have been accompanied by much sickness. Yet—except perhaps in a few instances of outbreaks in institutions—there has been happily nothing approaching to the epidemics with which we were familiar a few years ago.

The scope for conjecture and speculation which such an affection affords is boundless. It might, for instance, be held that although the morbific agent is still prevalent yet that immunity has been attained by the majority of persons—an immunity in the case of many only secured by a repetition of attacks. Or more fancifully the irregular distribution of localised outbreaks may be regarded as the gradual decline in extent and intensity of the epidemic waves that were so overwhelming in the pandemic period. However this may be, there is at any rate one fact about influenza upon which there would seem no room for argument and that is its infectiousness. This character it still betrays and perhaps at this time more strikingly than in the past, since it is not so universal in its incidence. We hear of reports of its appearance in small communities, in households and in offices, asylums, and factories, and the rapidity of its diffusion is further proof of its high degree of contagiousness. The same may indeed be said of the ordinary nasal catarrh, although we doubt if there is any distinct proof of the relationship of the latter with the specific disease influenza to which it has often been assigned. But influenza has its own typical characters and they still appear with each recrudescence, although from their variety and number they may sometimes pass unrecognised. The pyrexia and prostration, anorexia and insomnia, neuralgia and myalgia, and the sequels on the side of the nervous, circulatory, respiratory, and digestive apparatus are familiar enough now, so that their very diversity makes it all the more difficult to be certain of their one and only origin. It is not known why in some outbreaks there should be a greater liability to one form of inflammatory complication and in other outbreaks to another, but so it is, and unless we are to admit a multiplicity of poisons we can only conjecture that there must be some subtle variations of operation. The most reasonable view is that the toxin is one that acts mainly upon the nervous system and that it may lessen the resistance to other morbid influences. Certainly pneumonia following influenza is generally more serious and more prostrating than pneumonia not so associated; cardiac depression and failure are readily referable to disordered nerve action and the gastro-intestinal affections that seem to have been especially prominent of late may be mainly induced through nervous disturbances. It might well be asked whether an affection which apparently is linked with such varied disorders of the economy has not always prevailed and whether we are only now beginning to appreciate the presence of the underlying factor in the causation of what are wont to be regarded as local diseases. If so, then influenza is, and always has been, an endemic disease, but with each succeeding generation it sweeps over the world in epidemic form. If in the past we have not been alive to the influenzal factor in etiology we must beware lest in the present and the future our minds are so dominated

by the conception of its ubiquity and variety as to relegate to its sphere conditions that have no relationship with it whatever.

Annotations.

"Ne quid nimis."

THE PUBLIC HEALTH IN 1897.

THE Registrar-General in his quarterly return for the last three months of 1897, just issued, is able to give a brief but satisfactory summary of the vital statistics of last year. The death-rate in England and Wales in 1897 did not exceed 17·4 per 1000, which, with the exception of the unprecedentedly low rates (16·6 and 17·1 in 1894 and 1896), was lower than the rate in any previous year on record. The death-rate last year was 1·2 per 1000 below the mean rate in the ten preceding years 1887–96. Notwithstanding the fatal effect of epidemic influenza, more especially in 1891–92–93, the annual English death-rate in the seven completed years of the decennium 1891–1900 has been so low as 18·3 per 1000, against 22·5, 21·4, and 19·1 respectively in the three preceding decennia of the thirty years 1861–90. These figures point conclusively to continuing satisfactory health progress and to increasing longevity. The birth-rate in 1897 was the same as that in the preceding year—namely, 29·7 per 1000; and with the single exception of 1894, when the minimum rate of 19·6 was recorded, was lower than in any year on record. The English birth-rate averaged 35·3 per 1000 in the twenty years 1861–80 and fell to 32·5 in 1881–90; while in the first seven years of the current decennium the mean annual rate had further fallen to 30·3. To return to the mortality statistics, the unsatisfactory feature of an increase of infant mortality should be noted. The deaths of infants under the age of one year were in 1897 in the proportion of 156 per 1000 of the registered births, which exceeded by 8 per 1000 both the rate in the preceding year and the mean rate in the ten years 1887–96. This excess of infant mortality is in a certain sense explained by the increase of diarrhœa in 1897, to which 26,857 deaths were attributed in England and Wales against but 17,114 in 1896. There is probably no disease which may more correctly be described as "preventable" than infantile diarrhœa: this annual sacrifice of infant life therefore distinctly discounts our claim to satisfactory health progress, more especially when we recognise the fact that the mortality from this disease is almost exclusively confined to that section of the population generally known as the working or weekly-wage classes. Notwithstanding the marked excess of diarrhœa fatality last year the deaths attributed to all the so-called principal zymotic diseases corresponded to a rate which did not exceed 2·15 per 1000, against 2·17 and 2·21 in the two preceding years. This zymotic rate was 2·87 in the thirty-three great towns, 2·41 in sixty-seven other large towns, and only 1·62 in the rest of England and Wales. Whereas diarrhœa mortality showed a marked increase, due mainly to high summer temperature, the recorded death-rates from measles, scarlet fever, diphtheria, whooping-cough, and enteric fever were lower in 1897 than in 1896. Only 25 fatal cases of small-pox were registered in England and Wales in 1897, against 534 in the preceding year owing to the severe epidemic in Gloucester. Nearly 20,000 deaths last year were caused by different forms of violence, but the death-rate from this cause was slightly lower than in either of the two preceding years. Inquests were held in 33,999 cases, or in 6·6 per cent. of the registered deaths, showing a slight increase upon the proportion in the previous year. In rather more than 11,000 cases the cause of death was not certified either by a registered medical practitioner or by a coroner. It should, however, be remembered that a very large proportion of these uncertified cases were referred by the registrar to the local coroner, who, in the exercise of his discretion, decided that an inquest was unnecessary.

KISSING THE BOOK.

WE have frequently[1] commented upon the dangers which may accrue to a witness from kissing a copy of the Gospels which has been before kissed and handled by all sorts and conditions of people possibly suffering from infectious diseases. We have pointed out that this danger is in no way an imaginary one but very real and have urged the use of the Scotch form of oath in preference to the English. At a case which was tried in the Westminster County Court on Feb. 3rd a woman who had been subpœnaed as a witness produced her own copy of the Gospels to be sworn upon and we can only congratulate her upon her forethought and good sense. Over and over again we have pointed out that everyone has the right to be sworn after the Scotch fashion if he so desires it, but as the magistrates' clerks are sometimes ignorant of this form it would be well for witnesses to follow the above example and bring their own Testament. We cannot see either why it should not be made permissible (and, in fact, his honour, Judge Emden, has, we believe, allowed it) for the swearer to take the oath by laying his hand upon the copy of the Gospels. Kissing it is a comparatively modern and useless innovation.

A MARTYR TO THE NEW REGULATIONS OF THE GENERAL MEDICAL COUNCIL.

THE new Notice of the General Medical Council on the subject of unqualified assistants is causing great excitement and disturbance in various parts of the country where the unqualified assistant has been a sort of institution. One practitioner in Wales seems to have become a veritable martyr to the edict. Mr. John Jones held appointments in Clydach of the annual value of from £500 to £700 a year. Mr. Jones's assistant was Mr. Jenkins, who had been in the district for thirty years and had worked under various practitioners. Opinions vary as to Mr. Jones's relation to Mr. Jenkins and Mr. Jones argues that when he first came to terms with Mr. Jenkins the offence of "covering" had not been formulated by the General Medical Council. Be this as it may, when the new notice appeared Mr. Jones felt called on to dismiss his old assistant in deference to the views of the Council. He also resigned his position as "works-doctor" at Clydach, but offered himself for re-election. Such, however, is the resentment of the workmen at the treatment of the unqualified assistant that they have elected to the post a stranger, Dr. Harvard Jones, of Festiniog, by a large majority. They have no fault to find with Mr. John Jones's services and they admit him to be a man of great ability; but they are so attached to Mr. Jenkins, the unqualified assistant, as to think that Mr. Jones should have retained him even at the risk of the erasure of his own name from the Medical Register! This is, of course, absurd. Mr. Jones's position is a very hard one. There can be no doubt about the substantial soundness of the regulation of the General Medical Council. It is in the interest of the people themselves, who are entitled to have qualified medical men to attend them in their illness. For years past the General Medical Council has been confronted with the unqualified assistant backed or "covered" by registered medical practitioners. The arrangement and

[1] THE LANCET, Jan. 18th, Feb. 22nd, and April 11th, 1896.

its results have been the cause of wide scandal to the profession. And it had become imperative to deal with it severely. The men of Clydach are perhaps within their rights in acting towards Mr. John Jones as they have done. And we can quite understand their friendship for Mr. Jenkins and their sympathy with him in the somewhat abrupt interference with his career involved in the recent Notice of the General Medical Council. But they are scarcely likely to serve their friend by such harsh conduct to his late principal. They would have done better to re-appoint him and to have appealed for a short period of grace to the General Medical Council. Many members of the Council think that such a short period should be given for the sake of all persons concerned. But the most ardent friends of unqualified assistants must see that the change was necessary and that it was impossible any longer to insist on young medical men going through exhausting and costly examinations to qualify for the Medical Register and at the same time connive at the work of the profession being done by men who have not given any such guarantees of competence. The workmen of Clydach should realise that the Council is not acting arbitrarily but on the pressure of coroners, home secretaries, and other powers of the law and in the real interests of the working classes.

PHYSICAL CURIOSITIES.

NOT the least interesting feature of the colossal show organised by Messrs. Barnum and Bailey at Olympia is the collection of "freaks" which the industrious managers have been able to get together. That public interest in these creatures, whether human or belonging to some lower order, is very deep is proved by the tenour of letters which we now and again receive asking for explanations of the various physical phenomena manifested. We need hardly say that errors of development may produce extraordinary results and that the average "freak" is simply an error of development, the curious or, it may be, monstrous appearances being as a rule easily comprehensible by students of embryology and fœtal structure. But there are two persons giving performances at Olympia who are able to perform feats which must certainly produce a very astonishing impression on the anatomical mind. One of these entertainers, whose name is Delno Fritz, is a sword-swallower and asserts that he can swallow longer swords than have ever been swallowed before. We for our part never want to see anyone swallow more rigid metal. To those who know the surface markings of the abdomen and the situation of the stomach it is little short of appalling to see this man pass a sword down his gullet until the hilt impinges upon his teeth and then withdraw the weapon and demonstrate by outside measurement that in the erect posture the point falls some inches below the usual line of the lower curvature of the stomach. What really happens, of course, is that Delno Fritz has learnt, consciously or unconsciously, to stretch the somewhat loose and elastic tissues between the lips and the cardiac orifice of the stomach, so that these tissues will lie along his blunted sword in a condition of extension, while a protruded chin assists in the prolongation of the pharynx. It should be added that the solidity of the weapon with which the feat is performed is beyond question. A second person in whom medical men must be interested is one Young Hermann, who can expand and contract his chest and abdomen at will to really remarkable dimensions. He is able to make a *bonâ-fide* difference of sixteen inches in his chest measurements and accordingly to snap chains and straps fastened across his thorax by the steadily extending pressure he is able to effect upon them. The alteration which he produces in his abdominal outlines are no less striking. By swallowing air and then effecting pressure upon it by contractions of the rectus abdominalis muscle, he can rapidly pass from the appearance of extreme corpulency to the appearance of horrible emaciation, the skin of the abdomen appearing in the latter case to lie against the spinal column. His extraordinary power of swallowing and inhaling air enables him to shift the apex beat of the heart many inches and otherwise to displace his viscera. The power of swallowing air is not exceedingly rare,[1] but the extent to which Young Hermann possesses it is unexampled in our experience. It is probable that Joseph Clark, the celebrated posture-master of the seventeenth century, possessed the secret of this trick in addition to his unwholesome knack of dislocating many of his joints at will. It may be remembered that Clark's favourite joke was to go to a tailor to be measured with his right shoulder, say, much higher than the left, to return to fit the suit on with the protuberance on the other side, and finally to call at the shop and reject the clothes indignantly, having this time assumed a central hump. Young Hermann might amuse himself in a similarly ill-natured way if the inclination took him.

A CASE OF PORENCEPHALY.

IN the February number of the *Edinburgh Medical Journal* Dr. George Gibson and Dr. Aldren Turner describe a case of this condition which is of sufficient rarity to make a careful record of each case examined very desirable. It is true that the condition is well recognised, but its etiology is still a point on which authorities differ. The patient was a woman, aged twenty-two years, who was admitted to hospital in a condition of status epilepticus. The history was that a few days after her birth—which had been a long and difficult process and effected with instrumental aid, she had had a series of convulsions and soon after had been noticed to be paralysed in the left hand. She was backward both in speaking and walking, but she went to school when about seven years of age and learnt without difficulty to read and spell. She could never learn to write, however. She had apparently remained free from fits until about the age of seven years, when convulsions returned and she continued to suffer from them periodically during the rest of her life. She was evidently feeble-minded and after the fits was occasionally violent—indeed, almost insane. The chief peculiarity of the convulsions from which she suffered after her admission to hospital was that they were all unilateral, but sometimes one side of the body was affected and sometimes the other. In spite of various efforts to control the convulsions they continued with great severity and ultimately the patient died from exhaustion. At the necropsy careful measurement failed to reveal anything more than a slightly larger size of the arm, forearm, leg, and thigh on the right side. No difference in the bones was made out. The left side of the head was distinctly larger than the right. The middle and posterior fossæ of the skull were much larger on the left side than on the right. The right cerebral hemisphere was partly cystic and partly solid, the cystic part comprising the occipital lobe, the convolutions around the posterior end of the fissure of Sylvius and the ventral part of the temporo-sphenoidal lobe. The cavity communicated with the ventricle and was lined by a smooth membrane. The basal ganglia were atrophied. The left cerebellar hemisphere was considerably atrophied and there was partial atrophy of the mesial fillet on the right side. The part least implicated was the most internal, the so-called pes lemnisci, and this condition would support the view that the mesial fillet ends partly in the optic thalamus and partly in the cortex

[1] Edinburgh Hospital Reports, 1895; THE LANCET, Aug. 1st, 1896, p. 305.

cerebri. There was partial atrophy of the right pyramidal tract. Dr. Gibson and Dr. Turner, in conclusion, point out that various views as to the etiology of this condition have been propounded, but that the one which has been most favourably received is that it originates in the blocking of an artery with secondary softening and cystic formation. Such an origin would seem likely in this case as the part of the hemisphere chiefly affected is that related to the distribution of the posterior cerebral artery. If this view is correct the occlusion probably took place either at or just before birth.

BOILER EXPLOSIONS

ACCORDING to the report on the working of the Boiler Explosions Acts during the year ending June 30th, 1897, the total number of cases dealt with was 80 and by these explosions 27 persons were killed and 75 injured. This represents a total of 102 persons killed and injured during the year and exceeds the average (90·5) for the fifteen years during which the Act has been in operation by about 12·7 per cent. The loss of life taken alone closely approximates to the average (28·6) for the same period. The causes of explosion show no important variation. Of the 80 cases dealt with 28 were attributed to the defective condition of the boiler or of its fittings; 33 to defective design, workmanship, material, or construction, or to undue working pressure; 12 to ignorance or neglect of the attendants; and 7 to miscellaneous causes. In 42 cases the boilers proved to be under the inspection of some public association or were used in vessels provided with Board of Trade passenger certificates, but in many of these cases explosions were not due to defects which existed when the last periodical inspection was made. We notice that three accidents were due to heating apparatus, the cause being undue pressure due to the pipes becoming choked with ice. In one case, that of an appliance used for warming manufacturing premises, one person was killed. We have heard, fortunately, of no cases of kitchen boiler explosions this winter, for the simple reason that the winter has so far been a mild one and not visited by prolonged frost. At the same time, householders are now aware of the importance of having a safety valve connected with the boiler and some useful instructions upon this head appeared in our columns of Feb. 8th, 1896.

THE INSPECTION OF WATER-SUPPLIES.

DR. THRESH, the medical officer of health of the Essex County Council, has recently issued a reprint of his paper upon this subject and its issue is timely in view of the epidemic outbreaks which have recently occurred in several parts of the country. Notwithstanding the labours of various Royal Commissions and the unwearying efforts of the Local Government Board the outbreaks of preventable disease due to the pollution of public water-supplies, he remarks, furnish abundant proof of the fact that the care taken to insure the hygienic purity of water used for domestic purposes is in many cases utterly inadequate. He dwells upon the difficulty of preventing the pollution of surface water, which to be done completely can only be by acquiring and exercising control over the area from which such water is collected. The Public Health Acts, however, provide for the prevention of the source of pollution to streams. The control of the more important portions of the gathering ground is as important as the steps subsequently taken to purify the supply by filtration or storage. We are glad that Dr. Thresh calls attention to the fact that the sanitary authorities in a district may have on powers over either the collecting area or the company's works. Representations to the various bodies concerned may result in improvements being effected, as in the case of Stockport, where the report of the borough medical officer of health upon the unsatisfactory conditions obtaining upon the gathering ground of the water company resulted in securing the removal of many possible sources of pollution. The difficulties in the way, however, were so great that the Sanitary Committee recommended that a petition should be presented to the Local Government Board under the seal of the council, praying that legislation might be initiated whereby every sanitary authority supplied by a water company which is not also a sanitary authority should be empowered to authorise any duly appointed official to enter, inspect, inquire, and take samples at any part of any source or works of water-supply or water purification at any time by day or night, and whereby also such water company should be required to afford all reasonable facilities and information for such inspection, inquiry, and sampling. Dr. Thresh gives instances of the great purifying power of the subsoil in addition to the surface soil, but he points out that subsoil supplies derived from fissured strata should be very carefully watched. As is well known impurities may travel along such fissures for very considerable distances. Dr. Thresh admits that the whole subject is one which bristles with difficulties and that the full inspection of any source of public supply requires not only a certain knowledge of geology, physiography, chemistry, and of engineering, but a large amount of ingenuity and power of attention to details if no point is to be overlooked. "The strength of a chain is merely that of its weakest link and to miss the weak link is to court disaster." He concludes by emphasising the importance of the inspection of public water-supplies and of these inspections being periodical, say once a year, and in the intervals samples should be submitted to chemical and bacteriological examination, the frequency depending upon the importance and character of the supply. In a note upon the circular bearing upon this subject which was recently issued by the Local Government Board Dr. Thresh points out that this circular letter would have been more complete had it also directed attention to Section 7 of the Public Health (Water) Act, which renders it obligatory on the part of every rural sanitary authority from time to time to take such steps as may be necessary to ascertain the condition of the water-supply within its district and authorises the payment of all reasonable costs and expenses incurred by the authority for this purpose.

MR. HALL HAINS'S DEFENCE FUND.

A MEETING was held at the house of Mr. Joseph Smith, the chairman of the Defence Fund Committee, on Friday evening last, to present Mr. Hains with a cheque for the subscriptions received. The accounts were audited by Dr. J. Ball and were found to be correct. Subscriptions to the amount of £113 6*s.* 6*d.* had been received and after deducting £1 10*s.* 6*d.* for the expenses of type-writing, postage, and stationery there remained a sum of £111 16*s.* In presenting a cheque for this amount to Mr. Hains the chairman referred at some length to the case. He had watched it carefully and was convinced from the first of the unfounded nature of the charge. He warmly congratulated Mr. Hains on having left the court without a stain on his character and on the fact that to many of his brother practitioners had come forward in the manner they had done. Undoubtedly a great many had not subscribed owing to the fact that they considered Mr. Hains should have belonged to some medical defence association. He had great pleasure in handing to Mr. Hains what he considered to be a very substantial sum. Mr. Hall Hains, in reply, said that words failed him to express the gratitude he felt to Mr. Joseph Smith and the subscribers for coming forward in so extremely kind a manner. No one who had not experienced it could understand the terrible mental distress he suffered whilst these charges were hanging over his head; and it was only the knowledge of his complete

innocence that enabled him to bear up as he had done. In conclusion he most heartily thanked the subscribers for their great kindness in expressing their confidence in him in so substantial a manner. Dr. Arthur Walker proposed a vote of thanks to the honorary secretary and treasurer. Dr. J. Ball, in seconding this, said he quite appreciated the necessity of every medical man joining some defence association, yet at the same time because one had not insured in this manner was no reason why his brother practitioners should not help in a case of this kind. Having regard to the difficulty in collecting sums in these cases and also the many calls made on medical men he thought the sum a very substantial one. Mr. Herbert Carre-Smith, in reply, said that knowing the case as he did he was only too glad to help in any way he could. There never had been a case in which a man had more completely established his innocence and it was strong evidence of this that Sir Edward Clarke, a former law officer of the Crown, had written to say that Mr. Hains was "not even guilty of an indiscretion" in the matter. Mr. Carre-Smith also thought that the Royal Colleges of Physicians of London and Surgeons of England should protect their members in cases of this kind. He begged to thank the gentlemen who had been kind enough to propose a vote of thanks to him and he could only say that he was very glad to have made the acquaintance of Mr. Hains. A vote of thanks to the chairman for his hospitality brought the proceedings to a close.

THE QUESTION OF ANTISEPTICS IN FOOD.

As is well known unless it can be proved that injury to health has been done the law as it stands at present lends little assistance in preventing the employment of preservatives in food. When the quantity of the preservative has been found to be present in large excess, that is to say, over and above that which is required to preserve the food, the evidence seems to convince magistrates that in such a case it is clearly an offence within the meaning of the Act. Thus a few weeks ago a case was heard at Pontypridd in which it was shown that a certain specimen of butter had contained nearly 1 per cent. of boracic acid, whereas probably a fourth of this quantity would have been quite sufficient to preserve the butter. A conviction was obtained and a somewhat heavy penalty was inflicted. We have already expressed our views on this important section of the food question and the subject was discussed in THE LANCET Commission on Antiseptics in Food published in our columns on Jan. 2nd, 1897. This article contained also the opinions of several well-recognised authorities. The conclusion seems to be that under certain circumstances the employment of certain antiseptics might be permitted. The question remains, what is to be the permissible quantity? In a report drawn up by the medical officer of health of the county borough of Cardiff and subsequently presented to the Health and Port Sanitary Committee of that place Dr. Walford quotes the information which we placed at the disposal of our readers in the article just referred to. Dr. Walford thinks that although the addition of antiseptics to milk is quite unnecessary yet their use might be permitted in butter. At any rate where the use of preservatives is permitted the quantity, as we have suggested before, should be limited by law. But we do not think the new Food and Drugs Bill referred to in the Queen's Speech will afford the slightest assistance in this matter. Indeed, there is no sort of reference therein to the question. It is evident that the antiseptic value of boric acid is limited and it follows therefore that the quantity that is concerned in keeping an article of food free from change can have but little further action in the system. When, however, the quantity of preservative is largely in excess of that actually required to preserve the food, then this excess would act freely and perhaps injuriously in the system. We want a law, therefore, which by imposing some limit will effectually control the practice of employing antiseptics in articles intended for human consumption.

THE POLLUTION OF RIVERS BY TANNERIES.

THE dumping down of trade refuse into a river is just as much an offence as allowing untreated sewage to flow into it. Trade refuse may not carry with it the specific seeds of disease, but may give rise to a nuisance, foster putrefaction, and render the air of a neighbourhood foul and unwholesome. Last week at Leeds a tanner was convicted of allowing liquid refuse from his tannery in a very polluted condition to flow into the river. The pollution, counsel said, turned a natural watercourse into a foul sewer and caused danger to the health of many people. Some attempt had evidently been made to purify the refuse but without any practical result. Surely measures can be taken to do this efficiently. All along the banks of the lower reaches of the Thames glue manufacturers, fish manure makers, and the like are compelled to undertake not to discharge into the stream anything that is likely to become a source of offence and there is no reason why this regulation should not be enforced over the whole country.

GROSS CARELESSNESS OF A MIDWIFE.

AN inquest was held at the Market Harborough Police-court on Feb. 4th by the coroner, Mr. G. E. Bouskell, touching the death of Mary Ann McDermott, a married woman, who died from puerperal fever. She was attended at her confinement on Jan. 25th by a midwife named Eaton, who on her own evidence had attended a Mrs. Hezelmach on Jan. 1st in her confinement and had gone to look after the infant on Jan. 2nd, 3rd, and 4th, although she did not touch the mother. Mrs. Hezelmach died on the tenth day from puerperal fever. Continuing her evidence Eaton said that in consequence of a message she received from Mr. Durrant, the medical officer of health, she went round to his surgery on Jan. 11th. Pressed by the coroner she said that she went to see if she could safely attend another case in a short time. She also stated that Mr. Durrant said that in a case of this kind it was not usual for the midwife to attend another case for a month or six weeks, but on her stating that she did not nurse Mrs. Hezelmach he said it did not matter. She attended another woman within ten days, but in consequence of what the medical man said she tried to get off attending her. That woman was going on all right. She did not think the medical man really meant what he said. Mr. Durrant deposed that he sent a message by his assistant to Eaton that she was not to attend any maternity case for six weeks or two months. Eaton called to see him and he explained matters to her. On her saying that she had not nursed Mrs. Hezelmach he modified his term of restriction to one month. The coroner said he left it to the jury to answer the following questions: (1) Did the fact of Mrs. Eaton attending the deceased at her confinement on Jan. 25th last cause her to contract puerperal fever? (2) Was puerperal fever the cause of death? (3) Was Mrs. Eaton's conduct in attending the deceased at her confinement, having regard to the interview she had with Mr. Durrant on Jan. 11th last, of such a gross and culpable character as ought to be punished criminally? The jury answered Questions 2 and 3 in the affirmative. With regard to Question 1 they thought there was not sufficient evidence to show that Mrs. Eaton's negligence caused the deceased's death, but they thought she ought to be severely censured. They also added a rider to the effect that all midwives should be registered and not allowed to act unless they had a certificate. The

midwife was accordingly severely censured by the coroner. These sort of cases will continue to happen as long as the present state of the law holds. Anyone, however ignorant or careless, may practise medicine, surgery, or midwifery. It is fair to say that by her own request no medical man saw the deceased until just before her death, when Dr. Irwin Moore was called in and very rightly refused to give a certificate. It is of course impossible to definitely say that Eaton did infect the deceased, but it is all the same highly probable that she did. But there can be no doubt about the impropriety of her conduct. "She did not think the doctor meant what he said." She had no right to think, and if she did put this interpretation upon his words why did she "try to get off from attending" the case she attended after attending Mrs. Hezelmach "in consequence of what the doctor had said"? We should fancy, however, that Mrs. Eaton's "practice" will considerably fall off now that these facts are known.

THE EDINBURGH GRADUATES' MEDICAL CLUB.

THE quarterly dinner of this club was held on Wednesday, Feb. 9th, at the Holborn Restaurant, Sir Dyce Duckworth in the chair. About a hundred members were present besides guests. Among the latter were Colonel Arthur, Dr. Cholmeley, Dr. Hillier, Dr. Percy Kidd, Dr. Hector Mackenzie, Dr. Montague Murray and Dr. Sharkey. The chairman gave the toast of the evening—namely, that of "The Club," tracing its progress from its inception some thirty years ago. Dr. Playfair proposed the health of the guests, who were responded for by Dr. Kidd and Dr. Hillier. The health of the chairman was proposed by Dr. Glover. Some excellent music was provided by Mr. William Nicholl, Mr. Peterkin, and Mr. McCann, while Mr. A. B. Acton accompanied. Those present were indebted to the exertions of the indefatigable secretaries, Dr. Rutherford and Dr. Leslie Ogilvie, for a very pleasant evening.

AN INTERNATIONAL HEALTH EXPOSITION IN NEW YORK.

FROM April 25th to May 31st an International Health Exposition will be held at New York in the Industrial Building known as the Grand Central Palace, Lexington-avenue. The New York Household Economic Association and kindred organisations will coöperate with the management of the Exposition, which will embrace everything relating to health, both indoors and outdoors, and illustrate the sanitary and hygienic progress of the century. Mr. Charles F. Wingate is the supervising director. All exhibitions of this description should be encouraged, for they are of distinct benefit; firstly, in bringing together for comparison the latest sanitary appliances and methods; and secondly, in educating the public in their use and benefits. The second point is perhaps the most important, because whatever sanitarians may do with regard to the improvement of their science the resulting benefits to the health of the community must be tardy unless the public are ready to help in the application of the improved processes. In our own country we have far too few of these exhibitions and sanitary science would be much benefited if the public were better educated in this matter.

DEATHS UNDER ANÆSTHETICS.

AN infant, aged two years, was admitted to the Victoria Hospital, Chelsea, for relief on account of retention of urine. He was suffering from phimosis and posthitis, to great which condition chloroform was administered. The general condition was good. A Skinner's mask and drop bottle for chloroform were employed to induce anæsthesia while circumcision was performed. There was struggling and crying during the first half minute, then the anæsthesia appeared to take a normal course until collapse occurred some four or five minutes after the commencement of the inhalation, respiration and circulation stopping simultaneously. The chloroform was discontinued, artificial respiration was practised, hypodermic injections of brandy were given, the head was lowered over the end of the table, and the legs were raised. Nitrite of amyl inhalations were given and hot cloths placed over the præcordium. The breathing recommenced and the operation was begun, but only the initial incision was made, as in a few seconds the breathing again ceased, but was restored by the performance of artificial respiration and became deep and regular. No blood, however, escaped from the cut vessels and no radial pulse could be felt. There was slight cyanosis. In from thirty to sixty seconds respiration again failed and was again restored by artificial means. Shortly after this it again stopped and no measures succeeded in restoring it, although artificial respiration was kept up for an hour. It is stated that thirty minims of chloroform were used. The necropsy showed all the organs to be healthy and the heart to be empty and contracted. The account of the above case, for which we are indebted to the house physician in charge, seems to show that circulatory failure caused the death. The danger of struggling and crying during the inhalation of chloroform in children is too well known to need further comment; the prolonged and deep inspiration occurring in these conditions leads to the intake of an overdose of chloroform which apparently never in this case became eliminated or had already fatally damaged the tissues before it left the body.

THE QUEEN'S SPEECH AND MEDICAL LEGISLATION.

THE Queen's Speech read on Tuesday last contains several promises of legislation of more than passing interest to the medical profession. One suggestion for the Amendment of the Vaccination Law should meet with approval from persons of all shades of opinion. It will propose to give the parent the option of having the child vaccinated with glycerinated calf-lymph instead of with lymph drawn from other children and this will obviate the occurrence—rare, but at present possible—of the transmission of constitutional taints. Measures dealing with a Teaching University for London and with the Adulteration of Food and Drugs will also be laid before Parliament, "in case" (Her Majesty is made by Her Ministers to say) "the time at your disposal should permit you to proceed with them." Proposals for future legislation which are qualified in this manner do not generally lead to realisation, but it is something that the Government has definitely promised to attend to these subjects. If the present session does not offer opportunities we are encouraged to hope that in the next session the Bills will occupy higher places in the programme. This remark refers especially to the reconstitution of London University. We are not particularly sorry to see the Bill relating to the adulteration of food and drugs relegated to the future, for the measure does not, as we have already pointed out, offer any serious amendment to existing legislation. But the question of the reconstitution of London University is too urgent to admit of any further delay. We recommend the various bodies interested in the passing of the Bill now before the House and under the ægis of Government to urge upon all the metropolitan Members of Parliament, whatever their party or their creed, that it is their duty to secure for London a teaching university—their duty, in short, to help the Government to find time for legislation on the matter. A solid front of all the metropolitan Members would secure early attention for the measure.

THE lecture to be delivered at the Imperial Institute next Thursday afternoon by Mr. Herbert Birdwood, C.S.I., on the Plague in Bombay should be of considerable interest to

the medical profession as well as to those possessing Anglo-Indian interests. The lecture will be illustrated by a series of special lantern views from photographs brought home by Mr. Birdwood, who during the earlier stages of the plague was a member of Lord Sandhurst's Government and as such was jointly responsible for the measures adopted by the authorities in the Western Presidency. Earl Spencer will take the chair at 4.30 P.M. There will be a discussion. The arrangements are being made by the Indian Section of the Society of Arts.

AT the meeting of the Medical Society of London on Monday last the President, Dr. A. E. Sansom, referred with much regret to the death of Mr. Edward Lund, of Manchester, who had been a Fellow of the society for thirty years and had filled the offices of Orator and Councillor. A vote of condolence with the family in their bereavement was moved from the chair and carried, and the President intimated that he had requested a Fellow to represent the society at the funeral.

DR. R. E. BREDON, who has been appointed by the Chinese Government to be Deputy Inspector-General of Imperial Maritime Customs, is a medical man holding degrees from Dublin University. He has been a Commissioner under Sir Robert Hart, whose relative he is by marriage, for over twenty years and has acted also as Sir Robert Hart's chief secretary. Dr. Bredon was formerly an officer in the Army Medical Department.

THE anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms of the Hôtel Métropole on Wednesday, March 9th, at 7.30 P.M. Those intending to be present should signify the same to the honorary secretaries at the society's rooms, 11, Chandos-street, Cavendish-square, W.

PROFESSOR A. D. WALLER, F.R.S., will give an address on "Dosage of Anæsthetics" on Thursday, Feb. 17th, at 8.30 P.M., before the Society of Anæsthetists at their rooms, 20, Hanover-square.

NOTES ON THE NIGER-SOUDAN CAMPAIGN OF 1896-97.

BY R. HORACE CASTELLOTE, M.D. LOND., F.R.C.S. ENG.,

LATE EXPEDITIONARY MEDICAL OFFICER TO THE ROYAL NIGER COMPANY.

THE following particulars of the medical work of this short but eminently successful campaign have been compiled with the view of giving a general idea of the way in which it was carried out, of the difficulties that occurred in organising a medical department and in tending sick and wounded men in a country where dependence had to be placed entirely on what was carried with the expedition, and to give a general idea of the diseases prevalent in that little-known part of the world. It is not intended to give a lengthy and detailed account of the expedition with precise notes on all individual cases which came under notice. A good deal has been written about the diseases of the West Coast of Africa and it will only be necessary to indicate those peculiarities which occurred in the Royal Niger Company's force. I have to thank the permanent medical officers of the Company—especially Dr. Cargill, with whom I worked—for many valuable hints on my first arrival and for a knowledge of other things which did not come under my immediate notice.

A very brief account of the nature of the country in which we had to travel may not come amiss. All the operations were carried out within about sixty miles of the banks of the Middle and Upper Niger. The country varies immensely in different parts. The lower river runs through dense impenetrable forests on very low ground and these parts, as well as being very uninteresting, are generally considered by far the most unhealthy portions of the territories. After about the first 100 miles the banks begin to rise and the vegetation to thin out until, as one reaches the highest parts which lie in British territories, the country consists of open, sparsely-vegetated lands with rocky and sandy tracts here and there. In general terms the healthiness of the country increases with the distance from the sea, but the questions of elevation and vegetation bear on this matter also as is shown by the amount of sickness prevalent during the different expeditions.

The whole campaign consisted of three distinct expeditions. The first one was the most southern and traversed about 188 miles. The route lay through hilly country and mountain passes and defiles, in most places clothed with thick scrubby undergrowth and scattered trees. Here there was only a moderate amount of sickness amongst both whites and natives, mostly of a mild character. There was no fighting. The second march of about 60 miles to Bida was more to the north but lay through low-lying, flat, or slightly undulating country, where there was moderately thick rough undergrowth with a few scattered trees, alternating with belts of forest and two or three swamps. This expedition, from a medical point of view, was by far the most important both on account of the severity of the fighting, which gave us a good many wounded men, and also the amount of sickness prevalent amongst all ranks. The third expedition of 120 miles was a good deal more to the north through dry, rocky, and sandy country with very little thick vegetation. Here there was fighting, but we had hardly any wounded and the health of both black and white members of the force was excellent. My notes deal mostly with the second march to Bida, the capital of the Foulah Empire, the subjects of which are a powerful Mahommedan race who mustered roughly about 1500 horsemen and from 20,000 to 25,000 irregular fighting men on foot.

The Niger Company's force consisted roughly of 600 native troops, 800 native carriers and 32 Europeans. The soldiers were recruited mostly from the two powerful fighting races of Haussas and Yorubas and were men in the prime of life, of good physique, and used to the rough kind of campaigning of these regions. The carriers were of mixed races and on the whole were much inferior in physique and development to the troops. Those recruited from the rivers were the best and hardiest, but they were in the minority at Bida, and those coming from the different coast stations, Accra, Elmina, &c., suffered severely from the hardships and fatigue of the campaign. Amongst the natives of the force by far the greatest amount of disease prevailed amongst these coast carriers, so that for the final expedition they were nearly all sent down river and men recruited in the rivers substituted for them.

EQUIPMENT.

On each expedition there were two medical officers. Each one was provided with exactly the same equipment so as to be able to act independently and though it was seldom that the column was split up the considerable length of the latter marching in Indian file divided us sometimes by two or three miles. One marched in rear of the front guard and one in front of the rear guard with the whole transport, baggage, and centre guards between. The medical detachments, each complete in itself, consisted of one medical officer, one armed medical orderly, one native servant, four carriers for the medical equipment, four carriers for the stretchers, and four carriers as reliefs. The Royal Niger Company spared no expense in supplying the expedition with everything that might possibly be wanted both in the way of drugs, dressings, and instruments, and with medical comforts, stimulants, &c. The whole question of medical equipment was in the hands of Mr. W. H. Crosse, the principal medical officer of the company in London, and it was due entirely to his careful consideration of every detail and thorough knowledge of the country in which we had to work that we were able successfully to overcome the many difficulties that rose in dealing with sick and wounded in parts where we had to depend entirely on ourselves and where communication with a base of any sort was usually impossible. It is not necessary to enter into minute details of the equipment, but I wish to indicate how they were packed and arranged with a few remarks on some of the special things we carried.

Of the four carriers in each medical detachment told off

for equipment the first carried a metal "Congo" medicine-chest, a most convenient and compact box, the great utility of which was forcibly demonstrated on many urgent occasions when it would have been difficult to find what was wanted in a larger and less well-arranged case. It contained all the common drugs useful in the tropics packed in glass-stoppered bottles and mostly in the form of tabloids; a few, such as chloroform and chlorodyne, were necessarily liquid. The more commonly used drugs were in 6-oz. bottles, the others in 4-oz. ones. In addition to these there were small quantities of dressings, bandages, sutures, needles, hypodermic case, &c., together with a few first-field dressings. These cases stood the wear and tear of the campaign excellently. A few bottles got smashed, but the wonder is, considering the way in which the native carriers handle things, that more did not suffer. These accidents demonstrated another great advantage of the tabloid form of medication, as the drugs from a smashed bottle are none the worse and do not affect the other bottles. One hint, however, before leaving this subject. On the voyage out a bottle of liniment of iodine burst or was smashed and many of the labels of other bottles were obliterated. The iodine in the other cases was removed and the labels were rewritten before we started, but another time it would be advisable to omit this drug altogether. Another "Congo" chest was carried as an experiment in one or two of the marches. It was made of aluminium and the bottles were made of ebonite, but it was not altogether a success as it did not stand the hard wear well, though, of course, it was considerably lighter. As far as one could estimate, the quality of the drugs in tabloids did not suffer in any way from the climate during the time we were using them (about three months). The second carrier had an iron-bound wooden case arranged with necessary partitions which contained our surgical apparatus, including a very complete and handy operating case, chloroform, splints, a case of eye instruments, sutures, needles, and small quantities of dressing and bandages, the whole weighing about 64 lb. The third load was another case similar to the last which was not often required and could in consequence be left behind in times of emergency and sudden movements. It contained reserves of the commonly used drugs such as chloroform, carbolic acid, quinine, and ipecacuanha, and in addition supplies of such other drugs as were not often in demand and a few ointments, &c. The weight of this was about 56 lb. The fourth load consisted of two waterproof canvas valises containing an abundant supply of antiseptic dressings and lint, amongst which were packed small splints, bandages, bottles of soda-water and a few other necessary comforts. Each medical orderly carried an ordinary brown canvas haversack with a few antiseptic first-field dressings, bandages, stimulants, &c., and was relied on when in action and on shore marches and reconnaissances. Two other cases with further reserves of stores were left at the river base on the steamers from which the other cases could be restocked between the different expeditions. They were very little used.

The quantities of particular drugs to be taken was a matter for very careful consideration, as one did not wish to be hampered by unnecessary bulk and weight, and on the other hand to run short of the more useful drugs would have been awkward. Details of quantities would be of no great use. In some cases it was largely a matter of arithmetic—e.g., we started with nearly 110,000 grains of quinine in tabloid form. This large quantity of course was to provide for its administration to all white men as a prophylactic as well as a curative measure. The bisulphate of quinine was mostly used as, being more soluble, it could be used in rectal injections where the irritability of the stomach would not admit of administration by the mouth. A small quantity of lactate of quinine was also carried for hypodermic injections, but I do not think it was used, as it is impossible to give large quantities this way (and the drug is not much use unless pushed in bad cases), while it has the reputation of producing, even in small quantities, sloughing of the skin at the point of injection. Large quantities of antipyrin and ipecacuanha were carried and of these I shall have occasion to speak again in mentioning the diseases for which they are required. Of antiseptics carbolic acid and perchloride of mercury were taken; the latter, being in tabloid form, was found much the more convenient. The sal-alembroth gauze and wool were mostly used as antiseptic dressings. A supply of anti-tetanic serum was obtained from the British Institute of Preventive Medicine and Dr. Calmette, of the Pasteur Institute, Lille, kindly sent me over twenty flasks of anti-venomous serum as prepared by him. The former we took because arrow wounds in certain parts of the Niger territories are said to be followed by symptoms of tetanus. We had, however, no opportunity of using either of these serums. Before leaving this subject I must say a good word for one of the medical comforts that we took with us—Maggi's consommés. We had 600 on starting, but unfortunately we ran short of them before we had finished. Their great compactness, easy preparation, and agreeable flavour made them extremely useful as a diet for invalids, and their praises were sung by many of the patients whose taste for food in any form had almost disappeared. Their analysis proves them to have considerable dietetic properties. If anything, they are prepared with rather too much salt for hot climates and so tend to increase a thirst which seldom wants encouraging in the hot weather.

The next point I wish to dwell on is that of filters and in the same connexion the question of our water-supply. This question is one of immense importance and one which in the tropics gives rise to a lot of discussion both as regards the diseases propagated by ingestion of bad water and the best methods of purification of the latter. On the Bida expedition there was seldom any scarcity of water and that found on the march was of very fair quality. In the wells of Bida itself we found an abundant supply of clear, sweet, and cool water. The only test we were able to apply, apart from a visual and gustatory one, was with permanganate of potassium, which was quickly decolourised by one or two of the supplies, and over these a military guard was placed to prevent troops and carriers utilising them. The Bida wells were, as far as we could make out, only holes dug in the ground into which water had been poured from above and the process of purification was merely one of sedimentation. On the Ilorin expedition water was scarcer and in quality much inferior, at one or two places being almost black. But it seems rather a significant fact that while at Bida, with its comparatively good water-supply, the diseases usually thought to be water-borne were rampant amongst both whites and blacks, at Ilorin, on the other hand, there was hardly any sickness at all, and what there was was of a mild character. I shall have occasion to speak of this again under the head of "dysentery."

Filters.—Each white man was supplied with a small pocket charcoal filter in a metal case similar to those supplied to the troops in the Ashantee Expedition. They were compact and at times came in very handy, but they required very frequent cleansing to keep them clean, and even then so much inspiratory power was required to get such a small result that there was a strong tendency amongst thirsty men to discard their use. As syphons their action was very slow and if they were choked to any degree they would not work at all. In addition to these small filters some half-dozen Pasteur-Chamberland filters were taken but were soon given up as almost useless. The tin cases in which they worked would not stand the wear-and-tear of the campaign, soon got bent and would not allow of the formation of the vacuum on which their action depended. The porcelain tubes required very frequent cleansing. So that altogether the question of portable filters in the tropics is a difficult one. The principal requirements are these. A filter should be strong enough to stand the knocking about that things get from native servants and carriers; it should be capable of turning out a large quantity of water in a short time; should be easily taken to pieces for the component parts to be cleaned at frequent intervals (the amount of deposition on the porcelain or charcoal is evidence of the quantity of suspended matter in the water at most places); to be useful at short halts on the march it should be easily set going and packed up again; and lastly it must be fairly portable.

On the whole, probably one of the larger forms of Pasteur-Chamberland filters fitted with pump and with the body made of earthenware or galvanised iron, and securely packed in an outer jacket of wood or wickerwork, would turn out enough water for twenty men in a short time and would answer most of the other requirements. The only point not satisfactory would be its portability. It would form a complete load for one carrier and if of earthenware possibly would have to be carried between two.

Whenever possible, undoubtedly the best and most certain way of purifying or rather sterilising water is by boiling. This in itself is sufficient to make the water good and palatable for drinking purposes if it is naturally fairly clear, but if, as usually is the case, there is much suspended organic matter in it this can be largely removed by straining

through fine muslin or a clean pockethandkerchief before boiling.

Boiling was the process on the failure of our filters that we most generally relied on for getting a drink. Each white man carried a vulcanite water-bottle of about one and a half pints capacity covered with felt and fitted with padlock which was filled up with boiled water, tea, &c., overnight. But with thirsty men on a long day's march under a tropical sun it can readily be understood that one and a half pints of fluid did not go very far and three or four hours generally saw most of the water-bottles empty. After that one had either to exercise a great deal of self-control or risk drinking unprepared water whenever we came to it. It was not nice and it was not wholesome, but at all events it was wet and I think the latter quality was the one which recommended itself most to many. The vulcanite bottles require careful attention. In a short time, especially if used to carry tea, they acquire a musty, stale odour which communicates a similar taste to the water. Hot water shaken up with a little clean sand soon disposes of this trouble. The felt coverings absorb a good deal of water which on exposure to the sun and wind by evaporation renders the contents of the bottles very fairly cool. It was customary to dip them whenever we came to water.

TRANSPORT.

The transport of sick and wounded was a matter of some difficulty and had to be considered from two points of view—on land and on water. Firstly, on the march. All transport had to be carried by hand. The rough nature of the ground with narrow tracks only and no roads rendered all idea of transport waggons out of the question and even cacolets, had we possessed them, together with a sufficient supply of horses, would have been perfectly useless as they would soon have been smashed to pieces against trees, rocks, &c. Each medical detachment was provided with two canvas stretchers of the ordinary army pattern, for which eight carriers were apportioned, two for each stretcher and two reliefs. In addition each company of the troops carried four Ashantee hammocks which were carried folded up and only needed a long pole from 8 ft. to 9 ft. long to be cut to make them ready for use. The great superiority of the Ashantee hammocks over stretchers was very soon demonstrated. In the first place they are much more comfortable to travel in, especially over rough ground. By hanging native mats over the pole the patients are well protected from the rays of the sun, while the ends being open a good current of air passes through. But their great advantage is to the native carrier. These are trained from boyhood to carry loads only on their heads; they have very poor arm and shoulder development and in consequence a few hundred yards with a stretcher sees them completely done up though they will carry a man in a hammock two or three miles without requiring relief. The stretchers were therefore very soon given up for transport except in cases of emergency and when poles for the hammocks were not obtainable. They came in useful, however, in forming beds for a few of the native patients at night in our improvised hospitals, the wheels keeping the canvas a few inches above the ground.

Transport by river was not as easy as might have been imagined. It might be thought that having got the patients to the water all difficulties were over. But although when we went up there was a fair amount of water in the river by the time we were coming down it had fallen considerably, at some of the "crossings" there being not more than 4 ft. of water. Over these places the small launches could easily pass as a rule, but as there was so little accommodation for more than one or two sick men on board these boats it was necessary to utilise the larger steamers drawing from 4 ft. to 5 ft. of water, and these vessels frequently experienced great difficulty at the shallow crossings, getting stuck on sandbanks for hours and sometimes days at a time. The noise, fuss, and delay on these occasions was very trying with men whose best chance of recovery lay in getting down to the sea as soon as possible. One sick escort left Egborn for the coast—a distance of from 350 to 400 miles—with eleven white men and many sick soldiers and carriers. This journey down stream took sixteen days and even then only three of the worst cases arrived at the coast after changing vessels four times. The rest of the sick men took over a month to get down. The vessel we started in got stuck three days on a sandbank and then I transferred the bad cases to two native canoes in which we traversed 150 miles. The three days spent in these canoes were anything but agreeable, especially for the sick men. To the uninitiated it must sound something like boating on the Thames. But when one remembers that part of the country we traversed was hostile, that the canoes were mere shells cut out of trees about 2½ ft. across and in which there was no room to stretch the legs, that we were exposed to intense heat in the day from which the patients were only partly protected by "Omimi" mats and a damp, chilly atmosphere at night with endless mosquitoes with great difficulty in cooking food, it will be readily understood that the pleasures of boating vary considerably under different conditions and in different climes. The company of seven or eight malodorous and lazy native canoemen and servants does not tend to improve the situation.

Hospitals.—A few words on this subject is all that will be necessary. Native patients required very little in the way of shelter and all sick Europeans were treated in their tents. In the camps on the march rough shelters were built by the medical orderlies with a framework of poles, the sides and roof being thickly thatched with branches of trees and the ground covered with dry grass and leaves of which there was always an abundance. One side was left open to the north. While we were occupying Bida a large circular building open on all sides which had been used as a corn market was utilised as a hospital for native patients who were ranged round the sides in much the same way as patients are placed in the circular wards of some of our modern hospitals at home. This building answered its purpose very well for the short time we were there, but the difficulties of keeping any building sweet and clean where natives are congregated would soon have necessitated a change had we stayed there longer.

(To be concluded.)

OCCUPATIONAL MORTALITY.[1]

THIRD NOTICE.[2]

WE are reluctantly compelled to leave unnoticed several matters of medical interest concerning the mortality of occupations which are fully discussed in the report before us, and our remaining space will only suffice for a few remarks on the three important essays with which Dr. Tatham concludes this portion of his book. These essays treat of the following subjects: (1) Effects of Alcoholic Excess; (2) Results of Breathing Contaminated Air; and (3) Effects of Chronic Lead Poisoning. It is found that the mortality directly ascribed in the medical certificates to intemperance forms but an imperfect measure of the mischief due to abuse of alcohol. Some medical men when returning the cause of death of inebriates state only the pathological condition of the organs affected; cirrhosis of the liver, for example, is frequently returned as the cause of death in such circumstances, the fact that abuse of alcohol had induced the cirrhosis being omitted from the certificate. Upon this point we may remark parenthetically that whilst desiring to see the most accurate possible certification of death-causes in the interest of medical science, we fear that it will be long before medical men consent to inflict additional pain on bereaved relatives by employing such terms as alcoholism, intemperance, &c., in certificates which are not only read by the survivors but which have to be delivered by them to the local officers for registration. It would apparently tend towards the attainment of a more accurate return of the causes of death if the law were altered so as to require the medical attendant to transmit his certificate direct to the Registrar, who should be bound to treat it as confidential.

The experience of the period 1890–92 agrees with that of earlier periods in showing that publicans as a class succumb to the effects of intemperance much more rapidly than men engaged in any other occupation. Of the two divisions of the publican class innkeepers suffer from alcoholism and diseases of the liver more severely than their servants do; the former die from these diseases more than seven times faster and the latter four times faster than other occupied males. The mortality among

[1] Letter to the Registrar-General on the Mortality of Males engaged in Certain Occupations in the Three Years 1890–92 and on a new Healthy District Life Table. Supplement to the Fifty-fifth Annual Report of the Registrar-General. By John Tatham, M.A., M.D. Dub. Eyre and Spottiswoode. 1897.

[2] The first and second notices appeared in THE LANCET of Jan. 15th and 22nd, 1898, respectively.

publicans varies widely according to the locality in which they trade; they die most rapidly in the industrial districts and least rapidly in London. Next to publicans come butchers with a mortality figure from intemperance which is two and a quarter times as high as that of occupied males generally. Among the remaining occupations in the list given in the report chimney-sweepers and dock labourers suffer most severely from alcoholic excess, whilst coachmen and cabmen suffer least severely, the mortality of the last two from alcoholism and liver diseases exceeding that of other occupied males by about one-half. Diseases of the respiratory system cause heavy mortality among most of the classes of men who are addicted to the excessive use of alcohol, but Dr. Tatham inclines to the opinion that special liability to these diseases results from exposure to wet and cold, and that such exposure is followed by a fatal issue more often among intemperate than among temperate men.

The results of breathing an impure or dust-laden atmosphere are so baneful, especially to the workers in certain important industries, as to justify the devotion of a considerable amount of space to the consideration of this subject. In the endeavour to determine the exact amount of injury accruing to different classes of workers as a consequence of their employment, the statistician experiences great difficulty because of the inaccuracy of the national records of death-causes. For in the first place it must be remembered that the deaths are not in all cases certified by medical men, many of them are attested by coroners without medical evidence, and a certain though happily diminishing number are registered without formal certificate of any kind. In the second place it appears that under circumstances sometimes existing it is difficult to distinguish one kind of lung disease from another, and there is reason to believe that a considerable number of deaths which had resulted from non-tuberculous maladies have been returned in the registers and consequently in the classified tables as due to phthisis. In many remote country districts, in parts of Wales for example, where many of the inhabitants are unprovided with medical attendance, there is a tendency to attribute to what is locally known as consumption or decline all cases of illness that are accompanied by cough, expectoration, or difficulty of breathing. Having regard to the above considerations the expedient has been adopted of placing together the deaths due to phthisis and to other affections of the lungs and using the mortality thus obtained as a test of the healthfulness or otherwise of the several occupations under notice. Agriculturists have been selected as the class of workers with which the several dust-producing occupations shall be contrasted so as to bring into adequate prominence the enormous waste of life which, although largely preventable, is still sustained by those engaged in several important industries. In a table in this report a list is given of twenty-nine occupations which appear to be especially liable to injury from the presence of dust in the air breathed. This table shows the mortality from phthisis and diseases of the lungs together, the mortality from these diseases among agriculturists being taken as 100 and that among other occupations being shown in proportion. Of the twenty-nine occupations in this table there are twenty-two in each of which the combined mortality from phthisis and lung disease is more than double that of agriculturists, and of those twenty-two there are eight (giving employment to more than a hundred thousand men) in which the mortality from those diseases together ranges from three times to four and a half times that of the agricultural class. Potters appear from the experience of 1890-92 to sustain a mortality from the diseases in question which is far in excess of that experienced by any other workers. They succumb to non-tuberculous diseases of the lungs much more rapidly than they do to phthisis, and it is certain that much of the so-called "potter's phthisis" ought properly to be designated cirrhosis of the lung. Speaking generally it is found that respiratory diseases are more fatal than phthisis to occupied males, but there are certain occupations in which the reverse is the rule. Tin-miners, lead-miners, brassworkers, locksmiths, and carpenters sustain a mortality from phthisis which is higher than that from diseases of the lungs by proportions ranging from 2 per cent. among brassworkers to 35 per cent. among tin-miners. Dr. Tatham next proceeds to consider the case of those workers whose occupations are not of a dusty character or in themselves necessarily unhealthy, but who are the victims of unwholesome conditions resulting partly from the accumulation of respiratory and other organic impurities in the air breathed and partly from the cramped posture adopted by workmen engaged in sedentary labour. As in the case of the dust-producing occupations phthisis and lung diseases are here also employed as the test of unhealthiness in each of the tabulated occupations, amounting to fifteen in all. From a table which accompanies this portion of the report it appears that whereas engravers and artists experience a mortality from phthisis and lung disease which scarcely exceeds that of agriculturists there are at the bottom of the list eight occupations in which the mortality from these causes varies from twice to two and a half times that of agriculturists. It is remarkable that the workers in four of these eight occupations die from phthisis and lung diseases together more rapidly than farmers in agricultural districts die from diseases of every kind.

In his third essay Dr. Tatham gives a list of thirteen occupations in which there exists unmistakeable evidence of poisoning by lead. Among the several industries the mortality from plumbism varies enormously, for whereas amongst cutlers and printers the comparative figure does not exceed 3 it amounts to 21 among plumbers, to 73 among file-workers and to no less than 211 among lead-workers. But in addition to the deaths attributed directly to plumbism the report shows that sustained exposure to the poison of lead as a condition of labour is associated with increased liability to disorders of the urinary and nervous systems and further it is found that those occupations which show the greatest excess of mortality from plumbism also show the greatest excess from diseases of the urinary and nervous systems.

In Part I. of the supplement under notice a life-table was published based on the mortality in England and Wales during 1881-90. But from the nature of its construction it will be seen that a life-table of the general population can represent nothing more than the result of blending a series of widely differing conditions of existence. For certain statistical purposes, however, a more delicate standard of comparison is needed. In 1859 Dr. Farr published a life-table based on the mortality in sixty-three healthy districts—namely, those in which the mortality did not exceed 17 per 1000. Continued improvement in the public health has, however, made it possible to adopt a more exclusive standard, and in the present report there is published a new healthy district life-table based on the experience of 263 healthy districts with a population exceeding four and a half millions whose rate of mortality in the last decennium did not exceed 15 per 1000. The new healthy district life-table is printed in detail in the report before us and is followed by four tables in which the principal results of six life-tables are brought together. These six tables consist of the English life-tables of 1854, 1881, and 1891, the healthy district life-tables of 1853 and 1891, and the Manchester life-table of 1891. They are extremely interesting, not only as showing the increase in the expectation of life which has taken place throughout the country, but as indicating with unerring precision the amount of saving of life which has been effected by the sanitary improvements of recent years.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE ninth meeting of the Royal Commissioners was held in the Moses Room of the House of Lords on Monday, Feb. 7th.

The whole of the sitting was occupied by the examination of Mr. Haward, Comptroller to the London County Council.

Mr. HAWARD gave evidence with regard to the expenses of management and the fluctuation in these expenses with a view to showing how these were affected by the amounts paid in dividends by the companies.

Mr. CRIPPS expressed the opinion that evidence of this sort was not worth hearing.

The CHAIRMAN remarked that the evidence appeared to be intended to show that as the profits of the companies diminished the expenses of the management were cut down and that when profits increased the remuneration of those concerned in the management was made on a more liberal scale. He thought that the London County Council would not have the same inducement to keep down the expenses.

With regard to the method of purchase Mr. HAWARD suggested that the purchasing authority should have the option of buying the water companies' undertakings for cash and

that they might have the option of arranging to give the shareholders stock and annuities; the option of doing this should, however, rest entirely with the purchasing authority. Some evidence was given with regard to the purchase of the bridges over the Thames by the late Metropolitan Board of Works. In the case of the purchase of these undertakings a sum considerably smaller than that which the owners of the property at first demanded was ultimately paid. The companies affected settled with their debenture-holders and shareholders as to the distribution of the money obtained. It seemed to be generally admitted that the purchase of the property of the bridge-owners was not analogous to that of the metropolitan water companies, because in the case of the bridges they were, speaking generally, not paying concerns Mr. Haward considered that the method of giving the shareholders of the water companies terminable annuities was open to serious objections. These annuities involved a stereotyped rate of interest throughout, whereas in the case of the issue of the stock there would be the option of redemption. Terminable annuities were also open to the objection that the Inland Revenue authorities claimed income-tax on the whole amount of the payment. Mr. Haward agreed to the suggestion of Mr. Robert Lewis that terminable annuities were not "a trustee stock." The advantage that would accrue by the purchase of the water companies by the County Council was that they would be able to obtain money for the purchase at about 2½ per cent. with option of repayment at the end of sixty years. In the case of the issue of debenture capital by the metropolitan water companies the price of the issue was now determined by the Governor of the Bank of England. The Chelsea Company had lately obtained money at the rate of 2¾ per cent.; in other cases 3 per cent. had been fixed as the rate of interest. The witness believed that the price at which the County Council could obtain money would be a little over ¼ per cent. under the price at which the water companies would be able to raise it.

The CHAIRMAN asked in what ways Mr. Haward thought that there would be financial advantage by the management of the water-supply by the County Council.

The witness thought the chief advantages would be: 1. Economy in maintenance. The late Mr. Smith, who negotiated for the option of the purchase of the undertakings on behalf of Lord Beaconsfield's Government, estimated that there would be a considerable amount of saving in the cost of the pumping arrangements and in maintenance and he thought the advantage foreshadowed by Mr. Smith would be obtained by the County Council. 2. The directors' fees would be abolished. At the present time the cost of directors was about £28,000 a year. The place of the directors would be filled by a water committee chosen from the county councillors. Mr. Haward did not think that the present directors of the London water companies should receive compensation. 3. The salaries and superannuation fund would, the witness thought, be reduced by the County Council. This saving he estimated at 10 per cent. A considerable sum would be saved in the salaries of the secretaries of the eight companies. There would also be a considerable saving in the cost of the collection of the water rents. 4. Law and Parliamentary expenses would be reduced probably by one-half. 5. There would also be considerable saving in the amount spent at the present time by the water companies in stationery and printing.

The CHAIRMAN asked, having regard to the immediate future, if the undertakings of the water companies were bought by the County Council and it was necessary to divide the water between different Authorities whether the saving of expense to which Mr. Haward referred would be possible.

Major-General SCOTT asked whether the water committee of the County Council would superintend the management of the engines and it was suggested that possibly some members of the County Council were not reliable authorities on engineering matters.

Mr. HAWARD said that the present engineers of the water companies would be employed.

Major-General SCOTT said that in that case he did not see why the engineers should be paid less than they had been previously paid and pointed out that the directors of the water companies after some years often obtained a considerable knowledge of the working of the undertakings of which they had charge.

Mr. HAWARD was asked at what date he thought the County Council should take over the water-supply and he suggested April 1st, 1901. In answer to Mr. de Bock Porter Mr. Haward said he could not explain why the cost of management differed so much in the case of the different companies—why, for example, it was low in the case of the Southwark and Vauxhall Company and high in the case of the Chelsea Company. The only company which had a reserve fund was the West Middlesex. Mr. Haward believed that in making up the accounts the water companies wrote nothing off for the depreciation of the machinery as was done in the case of other companies.

Mr. LITTLER, Q.C., then cross-examined Mr. Haward with regard to the purchase of the undertakings and with regard to the price at which the water-stocks would have stood if the scheme of Mr. Smith had been carried out.

Mr. HAWARD said that whereas the present market price of the undertakings of the company was about £30,000,000 he estimated that had Mr. Smith's scheme been carried out they would have stood at something like £44,000,000. With regard to the authorities outside the metropolitan area it was true that their interests were not identical with those of the County Council. Witness did not know the exact number of the staff employed by the water companies.

Mr. PEMBER, Q.C., asked some questions with the view of showing the very large number of undertakings which were already under the supervision of the County Council and pointed out that carrying out the arrangements for the water-supply would increase the amount of work they had to do.

Mr. BAGGALLAY, Q.C., on behalf of the New River Company, pointed out that with regard to the issue of their capital they had carried out the provisions of their Act of 1866 and that the company had never made any claim for back dividends.

Mr. RICKARDS, on behalf of the Chelsea Company, complained that some items in the figures put in by Mr. Haward were not correct. Mr. HAWARD showed that these figures were derived from the Parliamentary return and the CHAIRMAN remarked that if they were not correct that was the fault of the Chelsea Company and it was idle for the company to dispute their own returns made to Parliament. It was intolerable that a company should send one return to Parliament and should come to the committee saying that the return was incorrect.

Sir W. GOLDNEY, on behalf of the City of London, wished Mr. Haward to make some addition to the tables which he had put in and pointed out that the earlier figures had been already given at an inquiry held by the Corporation of London.

The next meeting will take place on Monday, Feb. 14th. The Chairman said the place of the meeting would be announced later.

THE BATTLE OF THE CLUBS.[1]

MEDICAL DEFENCE IN SUBURBAN ESSEX.

THE inaugural meeting of the Suburban Essex Mutual Medical Protection Society was held on Jan. 25th as announced in THE LANCET of Jan. 29th. The following is an account of the proceedings. Dr. F. J. SMITH was in the chair.

The committee who had called the meeting delivered the following report: In December last a Provisional Committee was formed to extend the operations of the "Plaistow Maternity Charity and District Nurses' Home" to East Ham by the establishment of a branch in that district. For years the medical men of West and East Ham had suffered in silence from the competition of this institution. An informal meeting of the medical profession was held on Jan. 8th; a protest was drawn up signed by fifty-one practitioners of the district, printed and circulated within two days. Other meetings were held, a committee was formed, a second circular was formulated, and the result was that the Provisional Committee of the proposed branch of this charity withdrew their scheme as regards midwifery and announced their intention to confine themselves to general nursing. We had then to consider our position and determined to promote reforms in the parent institution in West Ham. Our next step, therefore, was to draw up a memorial to our Direct

[1] A reprint of the previous articles on the above subject has been published in book form entitled, "The Battle of the Clubs," and can be obtained from THE LANCET Office, price 1s.

Representatives upon the General Medical Council. We have also arranged this meeting that we might be confirmed and encouraged in our action by the approval of medical men from all parts of suburban Essex.

The following is the text of the memorial:—

A MEMORIAL TO DR. J. G. GLOVER, M.D., GEORGE BROWN, ESQ., M.R.C.S., AND VICTOR MORSLEY, ESQ., F.R.S., F.R.C.S., DIRECT REPRESENTATIVES FOR ENGLAND ON THE GENERAL MEDICAL COUNCIL.

SIRS,—At the inaugural meeting of the Suburban Essex Mutual Medical Protection Society, held on the 25th January, 1898, it was resolved that we should approach you, as our Direct Representatives upon the General Medical Council, respecting certain matters which have recently occupied the attention of the profession in this district.

We feel sure that you will give your best attention to the subject and help us in our fight against the growing tendency to exploit the medical profession in the interests of laymen who in the name of charity carry on medical institutions at our expense.

In order to fully set forth the position of affairs it will be necessary to refer to somewhat ancient history, to produce a few documents and statistics, and to extend this communication to some length; but we do not think you will grudge a little time and consideration to a subject which, whilst of primary importance to us who practise in this particular district, involves questions of the widest extent and of the highest interest to the profession at large.

Some ten years ago there was started in this neighbourhood an institution known as "The Plaistow Maternity Charity and District Nurses' Home." From a small beginning—two or three nurses at first—this so-called "charity" has grown, by dint of successful advertising, to be a very large concern; and with the increase of its funds and of its staff it has extended its operations widely throughout the district and amongst the more prosperous working-classes, to the encouragement of thriftlessness and to the serious detriment of the local practitioners.

From all parts of the country raw young women seek this institution, in which for a fee of from fifteen to forty guineas they undergo what is termed "training," and having done a few months' work by visiting from house to house in twos and threes they are let loose upon the community as "trained nurses." Trained nurses, forsooth, who have perhaps never seen the inside of a hospital and who certainly have not learned those elementary lessons concerning the proper relative positions of doctor and nurse which can only be acquired in the wards!

These nurses attend midwifery cases for a fee of 5s. and are "covered" by certain medical women and one local medical man.

In order to find work for their large staff, which numbered sixty last summer, and has since then, we believe, been further increased, cases are attended with entire disregard to the means of the patients. The wives of skilled mechanics earning good wages, clerks, and small shopkeepers are attended without inquiry or scruple; and every medical man in the neighbourhood can give instances of patients so attended who have on previous occasions cheerfully paid him fees of from one to two guineas.

The midwifery practice of the whole district—the backbone of general practice—is thus being ruined by this so-called "charity," which floods the religious and secular press with appeals on behalf of the "poor of Plaistow."

In support of these statements it is a significant fact that a protest against a proposed extension of the institution recently drawn up in great haste was signed by no less than fifty-one local practitioners. A copy of this protest is enclosed.

From the *Annual Charities Register and Digest for 1897* we glean the following statistics, although these are stated therein to apply to the year 1895, since when the operations of the institution have been much extended.

"*Total income*—£2637, of which £112 was in payments from patients.

"*Visits paid*—86,000, including those to 1365 *maternity cases*.

"*Fees for training* range from £15 15*s*. for three months' midwifery to £40 for one year's midwifery and district nursing (lady pupils)."

After an attempt had been made by the supporters of the institution to evade our protest mentioned above upon a mere verbal quibble we formed a committee and drew up a second circular at greater length. This also we append for your perusal.

In accordance with clause 4 of our second circular we hereby request your opinion, as our representatives on the General Medical Council, upon the position of these nurses and of the qualified persons "covering" them. Is this, or is it not, we would ask you, the employment of unqualified assistance as recently denounced by the Council? If not, is a private practitioner justified in employing an unqualified woman to assist him in his practice, but guilty of "infamous conduct" when the individual performing the same duties is a man?

In addition to receiving your personal opinion, which we shall value most highly, upon this point we would ask you, if the proposal be in proper form and practicable, to bring forward this important question at the next meeting of the Council in order that we may have guidance from that source to which we are entitled to look for light.

We should also be grateful for any suggestion of yours as to our future line of conduct, in our natural endeavours to check the destruction of our midwifery practice by this unfair competition.

We append various papers bearing on the subject, and thanking you in anticipation, have the honour to remain,

Yours faithfully,

A. W. BEAUMONT, Chairman } of Committee.
CHARLES ALLEN, Hon. Secretary }
(2, Litchfield-terrace, Red Post-lane, East Ham.)

Dr. SMITH (the chairman) said: I see the next item on the programme is a speech by the chairman. I will let you know exactly what I feel on this matter and then we can discuss what steps to take. I read here, in a quotation from the circular sent out by the promoters of this charity, "All critical and difficult cases are placed in the hands of fully qualified nurses." All I can say is that in my opinion a more gross insult to the medical profession never was put into the public prints before. Certainly as far as my feelings and to a reasonable extent my finances are concerned I can unhesitatingly put them at your disposal. We are all practically of one mind here to-night. We have all been grossly insulted. I myself as a member of the medical profession take it as an insult to myself. But of course to you working in this district it is something more than an insult. There is what I should call a deliberate attempt to rob you. I have not one word to say against memorialising the General Medical Council except that it does not act quickly enough. We should have another string to our bow. The alternative that has just occurred to me is, Can we get public opinion on our side? You see the thing flourishes apparently on the guineas of the so-called charitable people who really do not appreciate the condition of things in this district. They are told: "Just look at all these wretched people. Won't you give us a few guineas?" and the nurses are sent down here as a consequence. Now the point is this: Can we get their committee discredited in the eyes of the public? In this way we may check the supplies. This seems to me to be a method which would act more promptly than the absolutely constitutional one of sending the memorial to the Direct Representatives. I have been reading the discussion between Mr. Victor Horsley and Mr. Brudenell Carter and I cannot help thinking that the latter has law upon his side—namely, that the Medical Acts have not been drawn up with a view to protecting medical men. We can understand that the Members of Parliament who drew up these laws wished to preserve to themselves the liberty of consulting quacks and bone-setters, but to protect the ignorant from thinking the bone-setters qualified medical men, and it is from this point of view that the laws have been drawn up. I will now ask Dr. Campbell to propose the resolution conferring plenary absolution on this committee and according them encouragement.

Dr. HARRY CAMPBELL proposed: "That this meeting of medical men cordially endorses and approves of the action of the committee and hopes that they will continue their crusade against the abuse of medical charity which is so lamentably on the increase." The first fault he found with those who have endeavoured to establish a branch of the Plaistow Maternity Charity and District Nurses' Home here in East Ham was that the medical men had been entirely ignored. He must believe that it was an oversight and there was every reason to believe that those who were responsible for this movement were acting on philanthropic grounds, but if the medical men were represented on their committee they could enlighten the public in regard to it. He understood that the women who attended midwifery cases for five shillings had a training which might only extend over three months and he was struck by the passage in their own prospectus—"all critical and difficult cases are placed in the hands of fully qualified nurses"—which by implication admitted that the majority of cases were placed in the hands of women who were not fully qualified. Of the facts there could be no doubt and it was plain that there was injustice which could not be supported by any sensible person. What they had was rival practitioners subsidised by the charity of the public. He thought it would be an extraordinary thing if this absurdity could not be remedied. He understood that the medical men of the neighbourhood would be very pleased to have an efficient staff of nurses on whom they could rely, but the medical men must be the first people consulted and they must be fully represented upon any committee which endeavoured to carry out this work.

Dr. BUTLER-HOGAN, in seconding the resolution, wished principally to recommend that light should be let in upon the public mind on this subject. The public would want to know how it affected them. Was such a charity for their good or not? What did it mean to them? It meant that an inferior order of practitioners was established in rivalry with qualified men. This he held was not only detrimental to medical men but also detrimental to the public. If medical men felt diffident after many years of study and experience in hospital and general practice was it not preposterous and presumptuous for laymen to appoint and, as it were, register practitioners of the female sex because they had attended some home in some East-end slum for a few months? He thought that the more light that was thrown on this subject by the public press the better, not only for the medical men of this district and for the medical men of the whole country, but also for the British public itself. He suggested that the omission of medical men from the committee was not an oversight but due to the fact that the clergymen who formed two-thirds of

it felt that they were acting in opposition to the medical men. He suggested that these cobblers should stick to their last and should allow the medical men to stick to theirs. He contended that the medical fees in the district were already too reasonable and that medical men were not backward in giving their services for nothing if necessary. Notwithstanding these facts the hard-earned fees were taken out of the pockets of medical men to be given in charity. This kind of charity was degrading to the donors and demoralising to the general public.

The resolution of approbation of the work of the Provisional Committee having been carried unanimously a somewhat lengthy discussion as to the constitution of the society ensued, as a result of which it was proposed by Mr. HOUGHTON and seconded by Mr. BONNEFIN: "That the Suburban Essex Mutual Medical Protection Society be hereby formed and that the provisional chairman and committee be confirmed and given power to add to their number and to act in all necessary matters assured of the support of all the members." This was carried *nem. con.*; and it was then arranged to call a meeting at Stratford on Feb. 8th and to invite thereto all the medical practitioners belonging to the districts covered by the title "Suburban Essex."

A vote of thanks to the chairman for presiding having been carried by acclamation the meeting was adjourned.

ROWTON HOUSES.

THE scheme of building "homes" for poor working men on a self-supporting basis which owed its inception to Lord Rowton and Sir Richard Farrant has long since developed into a limited company for the building of "Poor Man's Hotels," nevertheless we believe that it is one of the most successful attempts to deal with the problem of housing a certain class of London workers.

A new "house," the third of a series, has now been built close to Newington-butts and overlooks the public recreation ground which was formerly the churchyard of St. Mary, Newington. As we have fully dealt with Rowton Houses on two previous occasions there is no need to describe the present building in detail, as it is practically constructed on the same lines as the others. The new building covers an area of 27,850 ft., is eight stories high, and contains 804 cubicles.

A reference to the illustrations in our previous articles will give an excellent idea of the internal arrangements of the buildings, but a personal visit is necessary to realise the good effect which these homes must have upon the tenants who occupy them. In view of the truism that cleanliness is next to godliness, residence in Rowton Houses must seem to be a perfect paradise to those who hitherto have been compelled to resort to cheap but nasty lodging-houses. For sixpence a night the lodger gets a really comfortable bed, a warm dining-room and smoking-room, and, in fact, every convenience. Comparing these luxurious homes (which pay a good dividend) with the disused stables and wretched shanties which have been—and, we believe, are still—converted into night shelters the question forces itself upon us, What profits do these shelters bring in to the body responsible for them?

THE MEDICAL AND DENTAL ACTS.

THE members and friends of the Metropolitan Branch of the British Dental Association to the number of about ninety dined together at Limmer's Hotel, George-street, Hanover-square, on the 27th ult. Mr. SIDNEY SPOKES, the President, occupied the chair, and was supported by Mr. Victor Horsley, Mr. Tomes, Mr. J. Smith Turner, Mr. J. Howard Mummery, Mr. S. J. Hutchinson, Mr. Morton Smale, Mr. F. Canton, Mr. Paterson, and others.

In proposing the toast of "The British Dental Association and its Metropolitan Branches," the CHAIRMAN said at first sight it might seem as if they were practically drinking their own health, but he thought there was another ground for heartily wishing prosperity to the association, for the association not only tended to make better professional men, but it benefited also the public at large, and therefore they might say what was good for the association was good for the public too. He coupled with the toast the names of Mr. Howard Mummery and Dr. Joseph Walker.

These gentlemen having responded,

Mr. CHARLES TOMES proposed "The Visitors." In doing so he said it was in accordance with the fitness of things that remarks in proposing the toast of the visitors should be addressed to that visitor whose name was coupled with the toast, and he was sure that he would have his audience with him in doing so on the present occasion. Everyone present would be aware that an agitation was on foot—an agitation finding voice in the columns of THE LANCET and the *Times*—to give the dental profession a Direct Representative on the General Medical Council. He referred to the work which Mr. Victor Horsley had done on behalf of the registered dentists.

Mr. VICTOR HORSLEY after thanking them for the honour which had been accorded to him referred to a deputation including Mr. TOMES and himself which visited the Board of Trade and interviewed a Minister of the Crown with the object of preventing by amendment of the Companies Act the evasion of the Medical and Dental Acts. The Minister said to them, "What sort of clause do you wish us to put into the Bill?" and when the deputation said they had drafted a clause which they thought was in harmony with the penal section of the Medical Act, and as their legal advisers informed them that their Acts protected only their titles they had so arranged the clause, he replied, "You cannot expect me to go into the House of Commons and to propose to offer you a mere shadow of protection like that. The only thing you can ask me to seriously propose is something that will deal with practice." Here then was a man with no legal bias who looked at the matter from a plain common-sense point of view. His idea of the thing was that they needed an amendment of the Acts which would in this matter of the Companies Acts protect them in the practice of their profession. He (Mr. Horsley) said that that was one of the most important statements ever made by a Minister of the Crown. Speaking of registration, he said the Dental Act had recently suffered the worst attack that had ever been made upon it. It suffered that attack because their branch of the profession had no Direct Representative on the General Medical Council, for if they had had a representative member on the Council he must have been put on the executive committee of that Council. The danger arose from what he believed to be, strictly speaking, an illegal standing order which provided that the Dentists Act should be administered by the executive committee of the Council. Section 9 of the Medical Act, 1856, did provide that the General Medical Council might devolve certain of its powers to the executive committee, but it certainly never meant that a whole Act of Parliament—dated 1879—was to be handed over to a half-dozen men who might or might not be present at a meeting of the committee. At the next meeting he was going to move a resolution that this standing order should be rescinded, and he should further ask that the Dentists Act should be administered by the Council as a whole. He told the dentists that they had more friends on the General Medical Council than they thought, but if they wanted to obtain their rights they must really set to work and ask for them. He thought they ought to ask for the next Crown vacancy without any beating about the bush. This was a public affair. He hoped very much that ere long they would have a Direct Representative on the General Medical Council.

THE MAIDSTONE EPIDEMIC.

THE inquiry into the Maidstone epidemic was resumed on Thursday last, when Mr. Bunting continued his evidence. Mr. S. L. Monckton was also examined.

Dr. James Tew gave evidence corroborating Mr. Adams's conclusion that the Farleigh water was contaminated with alvine matter. Mr. Sidney Stallard, surveyor and inspector of nuisances; Mr. Fletcher, chairman of the rural sanitary authority; Mr. J. Oliver, M.R.C.P. Edin., &c., the ex-mayor of Maidstone, and others were examined, after which the inquiry was adjourned to enable the Local Government Board inspectors to visit the water-springs.

On Tuesday, Feb. 8th, the Local Government Board

inspectors again met and Mr. W. Jackling, the sanitary inspector for the borough, tendered evidence as to the accuracy of his yearly reports on the sanitary condition of the town since 1891. He did not consider that the state of the drainage was in any way contributory to the cause or spread of the recent epidemic but he constantly had complaints made to him about the offensiveness of the sewer ventilators.

Mr. S. L. Monckton was recalled and stated that the Maidstone Corporation had been refused permission to borrow money by the Local Government Board for drainage purposes unless they adopted the system of land filtration in the disposal of the sewage. In consequence of the Board's decision the corporation had only repaired what brick barrel drains absolutely required repair.

Mr. W. J. Ware, manager to the Maidstone Waterworks Company, said the whole of the Farleigh mains were sterilised by the company. The Farleigh water could be pumped into the Cossington and Boarley areas in order to get high pressure in case of fire.

On the resumption of the inquiry on Wednesday a series of analyses made in September last were handed in on behalf of the water company. Mr. Ware, manager of the company, in examination said the filter beds were used only four or five times a year when the water showed turbidity from very heavy rains. They were now being reconstructed upon a new system under the direction of Dr. Woodhead. Replying to a question by Mr. J. S. Davy, witness said the collecting pipes at Tutsham were open-jointed earthenware pipes, placed about 3 ft. below the surface of the ground. The conduit through which the water passed when the filters were in use was not watertight but it was seldom used. The Farleigh supply was about 3,000,000 gallons a week, the other two supplies about 5,000,000 gallons.

Dr. Corfield gave evidence as to the means by which typhoid fever could be communicated and said that in his opinion the state of the drainage in Maidstone, as described, would be sufficient to cause the epidemic. He was confirmed in that view by the fact that nearly one-fifth of the cases had occurred after the water had been cut off. The evidence being finished Mr. Dickens, Q.C., replied on behalf of the water company and the inquiry was adjourned till Thursday.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Report on the Topographical, Geological, and Sanitary Conditions of Havant in relation to the Portsmouth Water-supply.—This report, which covers some thirty pages of printed matter, has been prepared by Dr. Theodore Thomson on behalf of the Local Government Board, with the assistance of Mr. William Whitaker, F.R.S., of the Geological Survey Office. It takes cognisance of a large number of important conditions within the Havant urban and rural districts in so far as these bear upon the public water-supply of Portsmouth, and the inquiry would appear to have been brought about partly by reason of the fact that the death-rate from enteric fever in Portsmouth has been exceptionally heavy, and partly because the War Office became alarmed on behalf of the garrison of that town and neighbourhood. On the first point we may note that whereas the death-rate in Portsmouth was 0·30 per 1000 persons from enteric and continued fever during the period 1886–95 it was only 0·21 during the nearest approach to a comparable period—namely, 1885–94—in the thirty-three large towns and cities of England. The diarrhœa death-rate of Portsmouth also exhibited excess. The surroundings of the sources of the Portsmouth water are dealt with in the report at great length and they are considered in relation to geological and other circumstances, the whole subject being well illustrated by maps and charts. Dr. Thomson, after considering these points, arrives at a definite conclusion that polluting matters of a dangerous sort abound in the neighbourhood of both the Havant and Bedhampton sections of the Portsmouth Company's waterworks, whilst the surroundings of the Farlington section of these works, although less objectionable, are yet far from satisfactory in this respect. Then arises the question as to how far these polluting agencies may be prevented from having access to the water sources and reservoirs of the company owing to the existence of barriers, both artificial and natural, which are interposed between the polluting agencies and the water. This part of the report is dealt with in a manner indicative of much care, and the judgment to be formed hangs largely upon the relative position of beds of gravel and of clay to each other and to the water sources. Mr. Whitaker's views on this point necessarily take precedence; but after all there is some doubt in his mind as to the precise situation of one border of a mass of underlying clay immediately to the north of the Havant works. If the boundary line is at one point then it follows as a consequence that the fouling of a gravel bed by sewage excrement and other refuse matters involves a risk of water pollution so grave that it should preclude the further use of the sources of water in question for human consumption. If, on the other hand, the border of the clay be at another point then the sources probably escape pollution. But other considerations had also to be taken into account, such as the movement of certain underground waters, the influence of varying pressure of water from below upwards, the results of pumping in increasing the base of the cone of exhaustion of a well and hence of the area from which water is drawn. These points are here discussed in detail. The bearing on the point at issue of such questions as the turbidity of the water at times, the varying chemical characters of the water, and the degree of prevalence of certain water-borne diseases on the populations using the water are also considered, and as the outcome of the study of a very laborious piece of work we may draw the following inferences. The quality of the water delivered by this company differs materially in its different sections; the proximity of houses to springs and collecting basins on the unprotected chalk tends to raise suspicion as to one of its sources; the pollution by sewage matters of a sheet of gravel and chalk near the waterworks enclosure emphasises the possibility of danger; the skirting of the waterworks enclosure by two streams fouled by sewage and like sources of pollution cannot be dismissed as harmless merely by reason of a puddle trench around the works; and the indirect confirmation of risk of real mischief which is afforded by other conditions, such as the occasional turbidity of the water and the excess of enteric fever amongst its consumers, is distinctly disquieting. Indeed, it is clear that it behoves the company either to put beyond question the possibility of their being at times obliged to deliver a water which is contaminated by means such as those referred to or to discontinue the use of the suspected and suspicious sources. We have not attempted to discuss all the many aspects—chemical, etiological, geological, &c.—from which the question has been viewed by the investigators, but we would observe that at a time when the subject of the wholesomeness of water-sources is prominently under consideration by sanitary authorities such a report may well form a guide to other investigators as to the lines of inquiry which need to be followed out in such cases. From this point of view we regret that it is not placed on sale, as is the custom with so many of the reports issued from the Medical Department.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Maldon and Chelmsford Rural Districts.—Dr. Thresh has devoted much attention to the water-supply of these two districts during 1897 and it is refreshing to read of the progress which is being made in this direction. Water-supply thereabouts, where the London clay prevails, is by no means a simple matter, owing partly to the thickness of the clay in question—some 300 ft. to 400 ft.—and partly to the fact that the water obtained from some of the deep wells in that part of Essex is at times so heavily impregnated with sulphate of magnesia as to be unfit for domestic use. Dr. Thresh, who has studied this latter aspect of the question, thinks that the magnesia is derived from the strata of gypsum and Epsom salts which are found in the London clay to the south of the Blackwater. On this view Dr. Thresh suggests that it would be possible by lining the boring to exclude the water from the magnesia-yielding strata, and he refers to certain instances which seem to support this thesis. Fortunately, in the Chelmsford district there are springs at Danbury which are, it appears, able to furnish over 100,000 gallons daily, and hence a large area in a thinly populated district can be supplied from

this source. In the case of one of these springs there would seem to be opportunity for chance specific pollution and hence, acting on Dr. Thresh's advice, the district council is erecting an unclimbable fence around the spring, leaving a clear area of fifteen feet all round. In the Maldon district the presence of the Blackwater, which practically divides the sanitary area into two parts, necessitates the appointment of two inspectors of nuisances, and Dr. Thresh has drawn up some capital forms for the use of these officers by means of which systematic and periodical inspection of water-supplies and sewage-works is guaranteed.

Aston Manor Urban District.—Mr. Henry May, the medical officer of health for this district, was appointed as far back as 1873, and now after twenty-five years' service he passes to a well-earned retirement. Mr. May has seen great changes and fluctuations in the condition of Aston, and in this, his last, report he contrasts the present condition of affairs with those obtaining when he took office. The general death-rate has undergone a considerable diminution, but it is to be deplored that the infantile mortality has increased in a marked degree; the zymotic death-rate has, too, not fallen as much as could have been wished. When Mr. May entered on his duties there were no means of isolation and disinfection, but the sanitary authority is now about to erect what must be regarded as the most modern development of preventive medicine—i.e., a separate small-pox hospital, and Mr. May is to be congratulated on bestowing this as a parting gift to his district. Infantile diarrhœa is one of the greatest blots on the sanitary records of Aston, the mean annual death-rate from this cause having markedly increased during recent years. Why this disease should thus prevail is not altogether clear, but Mr. May is probably not far wrong in urging the abolition of the privy middens with their accompanying soil-pollution.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6483 births and 4133 deaths were registered during the week ending Feb. 5th. The annual rate of mortality in these towns, which had been 20·6 and 18·7 per 1000 in each of the two preceding weeks, rose again last week to 19·2. In London the rate was 21·5 per 1000, while it averaged 17·6 in the thirty-two provincial towns. The lowest rates in these towns were 11·1 in Bolton, 13·4 in Derby, 13·6 in West Ham, and 14·1 in Bradford; the highest rates were 20·4 in Oldham, 21·4 in Birmingham, 21·5 in London and in Portsmouth, and 23·7 in Plymouth. The 4133 deaths included 453 which were referred to the principal zymotic diseases, against 521 and 488 in the two preceding weeks; of these, 141 resulted from measles, 130 from whooping-cough, 79 from diphtheria, 41 from scarlet fever, 37 from diarrhœa, and 25 from "fever" (principally enteric). The lowest death-rates from these diseases were recorded in Croydon, Bolton, Burnley, and Huddersfield; and the highest rates in Birkenhead, Oldham, Leeds, and Cardiff. The greatest mortality from measles occurred in Swansea, Halifax, Sunderland, Bristol, Leicester, and Brighton; and from whooping-cough in Portsmouth, Sheffield, Oldham, Leeds, and Gateshead. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 79 deaths from diphtheria included 42 in London, 7 in Cardiff, 6 in West Ham, 6 in Leeds, and 5 in Liverpool. No fatal case of small-pox was registered during last week either in London or in any of the large provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday, Feb. 5th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2964, against 3253, 3149, and 3061 on the three preceding Saturdays; 209 new cases were admitted during the week, against 215, 248, and 244 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 567 and 471 in the two preceding weeks, were again 471 last week, and were 18 below the corrected average. The causes of 38, or 0·9 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Bradford, Leeds, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Leicester, Liverpool, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 24·3 to 17·4 per 1000, rose again to 18·0 during the week ending Feb. 5th, but was 1·2 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·0 in Leith and 15·3 in Greenock to 18·6 in Paisley and 18·7 in Glasgow. The 543 deaths in these towns included 21 which were referred to whooping-cough, 20 to diarrhœa, 8 to measles, 8 to diphtheria, 6 to scarlet fever, and 3 to "fever." In all, 66 deaths resulted from these principal zymotic diseases, against 64 and 67 in the two preceding weeks. These 66 deaths were equal to an annual rate of 2·2 per 1000, which slightly exceeded the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 11 to 27 in the three preceding weeks, declined to 21 last week, of which 15 occurred in Glasgow, 3 in Paisley, and 2 in Edinburgh. The deaths referred to diphtheria, which had been 5 and 3 in the two preceding weeks, rose again to 8 last week, and included 5 in Glasgow and 2 in Edinburgh. The 8 fatal cases of measles exceeded by 2 the number recorded in the preceding week, and included 7 in Glasgow. The deaths from scarlet fever, which had been 9 and 7 in the two preceding weeks, further fell to 6 last week, of which 4 occurred in Glasgow and 2 in Edinburgh. Of the 3 fatal cases of "fever" 2 were registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 139 and 92 in the two preceding weeks, rose again to 117 last week, but were little more than half the number in the corresponding period of last year. The causes of 33, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 33·0 and 28·9 per 1000 in the two preceding weeks, rose again to 32·8 during the week ending Feb. 5th. During the past five weeks of the current quarter the death-rate in the city has averaged 31·5 per 1000, the mean rate during the same period being 22·2 in London and 18·9 in Edinburgh. The 220 deaths registered in Dublin during the week under notice showed an increase of 26 from the number in the preceding week, and included 14 which were referred to the principal zymotic diseases, against 21 and 17 in the two preceding weeks; of these, 7 resulted from "fever," 3 from whooping-cough, 2 from scarlet fever, 2 from diarrhœa, and not one either from small-pox, measles, or diphtheria. These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 2·6 in London and 1·6 in Edinburgh. The deaths referred to different forms of "fever," which had been 8 in each of the two preceding weeks, declined to 7 last week. The fatal cases of whooping-cough, which been 2 and 4 in the two preceding weeks, fell to 3 last week. The 2 deaths from scarlet fever were within one of the number of the preceding week. The 220 deaths in Dublin last week included 40 of infants under one year of age and 51 of persons aged upwards of sixty years; the deaths of infants exceeded those recorded in any recent week, while those of elderly persons showed a further decline. Eight inquest cases and 8 deaths from violence were registered; and 68, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or more than 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

NAVAL MEDICAL SERVICE.

FLEET-SURGEON ROBERT FREDERICK YEO and Fleet-Surgeon Myles O'Connell Macswiny have been placed on the retired list at their own request.

The following appointments are notified: Staff-Surgeons: Alfred M. Page to the *Magda'a* and Robert H. Nicholson to the *Brisk*.

ARMY MEDICAL STAFF.

The under-mentioned Surgeon-Lieutenants to be Surgeon-Captains: William S. Harrison, Harry A. L. Howell, Douglas Lawson, Edwin B. Steel, Charles W. Profeit, Frederick Kiddle, Henry E. Staddon, James A. Murison, Samuel J. C. P. Perry, and Arthur F. Heaton.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following promotions are made, subject to Her Majesty's approval: *Bengal Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Charles John Milne, Algernon Francis Stevens, Clement Henry Bensley, Francis Hammond Watling, Arthur Gwyther, Edgar John Morgan, William Carr, and John Archibald Hamilton. *Madras Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Frank Wall and Charles Montague Matthew. *Bombay Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Samuel Evans and James Haldane McDonald.

Surgeon-Major G. E. Fooks and Surgeon-Captain J. G. McNaught have passed the Lower Standard Examination in Pushtu.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant S. Oliver is seconded for service under the Foreign Office.

VOLUNTEER CORPS.

Artillery: 1st Sussex (Eastern Division, Royal Artillery): Surgeon-Lieutenant-Colonel W. S. Burrows resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. 1st Worcestershire and Warwickshire: Surgeon-Lieutenant J. H. Blakeney to be Surgeon-Captain. *Rifle:* 1st Volunteer Battalion the Lincolnshire Regiment: Surgeon-Captain A. E. Odling resigns his commission. 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): Lieutenant B. G. A. Moynihan, M.B., resigns his commission. 4th Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Major J. Macfie, M.D., to be Surgeon-Lieutenant-Colonel. 1st London: Surgeon-Major H. F. Stokes resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement.

THE MEDICAL DEPARTMENT OF THE UNITED STATES NAVY.

In the last report addressed by the Surgeon-General of the United States Navy, Chief of the Bureau of Medicine and Surgery, to the Secretary of State two distinct periods of twelve months each are dealt with, operations of a fiscal nature being referable to the year ending June 30th, 1897, while vital statistics and all other subjects bearing on the health of the *personnel*, naval and marine, are set forth for the ordinary calendar year ending Dec. 31st, 1896. The combined result is embodied in a volume of convenient dimensions containing 330 pages of well-arranged and interesting matter, with an adequate index. In a short opening section the acting Chief of the Bureau, Dr. J. C. Boyd, gives a *résumé* of the administrative work of the whole department, referring especially to the naval hospitals on shore, of which no fewer than twelve are mentioned, including one at Yokohama and another in Alaska. Having briefly described the ameliorations recently effected in these establishments with the satisfactory result of placing them on an equal footing with the leading American civil hospitals "in all that pertains to modern medical and surgical requirements," the Surgeon-General goes on to urge "the necessity of making suitable provision for the equipment of a naval hospital corps." The importance of special training for men who as attendants are entrusted with the care of the sick afloat is immense, but although according to Dr. Boyd careful attention is being paid to this branch of organisation by the principal foreign Governments he is candid enough to admit that the absolute unfitness of United States naval nurses (baymen) under the present system of appointment "is too obvious for serious discussion." Referring to the same subject in his report on the United States ship *Massachusetts*, Surgeon Siegfried says: "The great want is a body of trained baymen or nurses, and these should be better paid and of better stamp and fibre. ..... The bayman, who should be an intelligent, sober man, and well trained in many things pertaining to nursing, dieting, ambulance, and aid to wounded, and have a moderate amount of education, finds his pay at present among the lowest in the ship's company; even the men caring for store-rooms get more per month." The remainder of the volume is largely taken up with the reports from medical officers in charge of naval hospitals and cruising ships, but towards the end a considerable space is devoted to special reports of a very varied description. Another important feature is the publication of "Selected Medical, Surgical, and Sanitary Notes from Ships, Shore Stations, and Hospitals." Statistics and statistical tables do not occupy much space relatively, but the information seems sufficient and is clearly conveyed. The following items are taken from a table entitled "General View of the Effects of Disease and Injury on the Navy and Marine Corps during the year 1896": Average strength, 14,196; total admissions to sick list, 10,708; admissions per 1000 of strength, 777·75; number constantly sick per 1000 of strength, 29·71; average number of sick days per man, 10·87; average duration of each case in days, 13·98; discharges from the service for disability per 1000 of strength, 17·19; deaths from all causes per 1000 of strength, 5·49.

HEALTH OF THE NAVY.

The report of the health of the Navy for 1896 is a Blue-book of 200 pages about one-half of which consists of statistical tables. Sir James Dick, the director-general of the medical department, states that the returns for that year are the most satisfactory of any that have appeared since they were first published in their present form in the year 1856. The total force in the service afloat, "corrected for time," in the year 1896 was 72,620 officers and men, of whom 64,620, or 89 per cent., were between the ages of fifteen and thirty-five and only 1060, or 1·45 per cent., were above forty-five years of age. The total number of cases of disease and injury entered on the sick list was 66,162, showing a ratio of 911 per 1000 of the mean force, the lowest recorded during the last forty years. The average number of men sick daily was 2838. The total number of persons invalided was 1987 (1847 for disease and 140 for injury), of whom 1299 were finally invalided from the service, being in the ratio of 17·9 per 1000 for the whole force. The lowest sick-rate was on the South-East Coast of America station and the highest on the home station. The total number of deaths was 384; of this number 277 were due to disease and 107 to injury. The death-rate from disease alone was 3·81 per 1000 and from injury 1·47 per 1000; the combined death-rate (5·28 per 1000) is the lowest since 1856. Of deaths from disease the largest number under any single heading is 75, these being entered under diseases of the respiratory system. The sickness and mortality attributed to several other classes of disease are as follow: Small-pox, 11 cases, 2 deaths; other eruptive fevers, 620 cases, 6 deaths; enteric fever, 155 cases, 40 deaths; other continued fevers, 2099 cases, no deaths; yellow fever, no case; cholera, 3 cases, 2 deaths; dysentery, 76 cases, 5 deaths; influenza, 1006 cases, no death; mumps, 410 cases; diphtheria, 12 cases, 2 deaths; whooping-cough, 2 cases, no death; plague, 3 cases, all fatal; malarial fevers (including many cases of "Mediterranean fever"), 1402 cases, 10 deaths; primary syphilis, 3571 cases; secondary syphilis, 1852 cases; gonorrhœa, 5608 cases; rheumatism, 2816 cases, 10 deaths; tuberculous diseases, 111 cases, 24 deaths; diseases of nervous system, 659 cases, 14 deaths; mental diseases, 146 cases, 1 death; diseases of the circulatory system, 313 cases, 29 deaths; diseases of the respiratory system, 7601 cases, 75 deaths; diseases of the digestive system, 8848 cases, 18 deaths. The cases of primary syphilis are in the ratio of 49·2 per 1000 and show an increase of 0·63 per 1000 as compared with 1895; secondary syphilis yields a ratio of 25·5 per 1000 and shows an increase of 1·2 per 1000 as compared with 1895. No one was killed in action and only one person was wounded in action—a petty officer of the *Tarush* whose thigh was amputated after having been struck by a shot during the bombardment of the palace of the Sultan of Zanzibar. There were twelve deaths by suicide. The three persons attacked with plague were a Goanese employed as a ship's cook at Bombay and two Chinamen at Hong Kong; the disease was no doubt contracted while the man were on shore.

THE INDIAN FRONTIER.

According to the best estimates that can be formed of the relative losses on the part of the Afridis and the British in the late action in the Khyber it appears that the number on our side was five officers and sixty men killed or wounded, as against about thirty on the part of the Afridis. It is believed that active operations are about to be immediately resumed by Sir William Lockhart. The Royal Irish Regiment, which it will be remembered was sent down from the

front at the beginning of the Tirah campaign, has been since ordered to rejoin the force. The regiment has been in India since 1884 and has suffered greatly from malarious fever. It should by this time be pretty well known that a corps, whether British or native, with a medical history of malarious fever is not likely to render effective service in the field. It is quite clear from the Prime Minister's remarks towards the close of his recent speech in the debate on the Address in the House of Lords that, while deploring the necessity for the frontier campaign, which he regards as having under the circumstances been forced upon the Indian Government, Lord Salisbury is most desirous that it should be brought to a speedy termination and that a moderate and conciliatory policy as regards the tribes should as far as possible be adopted and followed.

THE ARMY SCHEME.

The public generally, as well as the medical staff and other officers of the army, are awaiting with no little curiosity the declaration of the Government proposals for securing the increased strength and efficiency of the army and for amending the present conditions of military service. Meanwhile, newspaper controversy on the subject continues with unabated vigour for the enlightenment as well as the perplexity of the general reader.

THE HEALTH OF THE ARMY IN INDIA.

Lady Henry Somerset has forwarded another communication to Lord George Hamilton withdrawing the proposals put forward in the former one because she considers that restrictive regulations instead of being used as a possibly effective auxiliary to moral efforts seem likely to be always accepted as a convenient substitute.

Correspondence.

"Audi alteram partem."

"THE USE OF MASSAGE IN THE TREATMENT OF RECENT FRACTURES."

To the Editors of THE LANCET.

SIRS,—May I add a word of testimony to the excellence of the advice given by my friend Mr. Bennett in his paper on the Use of Massage in the Treatment of Recent Fractures? Since 1890, mainly as far as I remember from the suggestion made by Mr. Kendal Franks in a paper in the *Dublin Journal of Medical Science* in June of that year and subsequently from conversation with him, I have seldom had a case of fracture in the neighbourhood of a joint accompanied by swelling in which I have not employed massage within a few days of the injury. And I am confident of its value not only, as I believe, in the promotion and hastening of good bony union, but also as I know in the prevention of that stiffness about the joint which is often the cause of trouble and it may be of lasting impairment of movement in many cases of the kind.

Look, for example, at a case of Pott's fracture. Who has not seen the swelling round and about the ankle and does not know how difficult it may be to get rid of it entirely and restore movement in the joint after the limb has been released from splints? The simple reason is that the lymph and blood effused amongst the tissues as a direct result of the injury inflicted upon and near them comes very rapidly to glue the various structures together and when more or less organised cannot be wholly absorbed. Let the parts, however, be subjected to massage within a short time of the accident; the lymph is thereby dispersed and adhesion of neighbouring tissues together is avoided. Day by day the size and natural contour of the limb are restored and abiding after-stiffness is altogether prevented. Furthermore the treatment is eminently grateful to the patient. His limb feels more comfortable, the sense of distension is lessened, and if perchance the massage has been painful on the first occasion pain is rarely induced by it after two or three days. I have never had reason to regret the use of massage under the conditions named and it is singular to note how early it may be begun. I have frequently ordered it as soon as the third day and to do so within a week is almost an ordinary routine of treatment. To recommend it in every case without discrimination is the purpose neither of Mr. Bennett's paper nor of this letter. Each case must be judged by itself; the state of the tissues must in each instance tell when massage may be begun with safety; it must always be carried out with care; but that we have in massage an invaluable remedy in the treatment of most fractures near joints is in my experience a matter of no doubt whatever. The well-nigh universal practice of fixedly securing broken limbs in splints and giving no heed to the contiguous joints, loses sight of the fact that moveable parts which have been injured very often demand systematic movement to restore them to their former state of usefulness, and massage as an aid to it in the early treatment of fractures near joints is an important remedial measure in the hands of the surgeon.

I am, Sirs, yours faithfully,

Feb. 7th, 1898. HERBERT W. PAGE.

To the Editors of THE LANCET.

SIRS,—On reading Mr. Bennett's paper in THE LANCET of Feb. 5th I am induced to speak of the application of the method to sprains and dislocations. For a good few years I have used almost the identical methods in both. There is no doubt that stiff joints in both those conditions are as great bugbears as after fractures. Since I have used the procedure so ably described by Mr. Bennett it is a very rare circumstance that I have any worry about sprains or dislocations and, what is more, I have no fear of bone-setters interfering with my work.

It is remarkable how quickly pain and swelling disappear in a joint although the injury may have taken place very shortly before. Even where the capsule is badly torn, as sometimes happens in the ankle, I have no fear in movement from the very first. The space fills up as well as when the joint is kept immoveable and there is no after-weakness. Let the ankle-joint be taken as an example so that the procedure may be explained. Perhaps we see the case an hour after the injury. The joint is very painful, swelled, and without motion. Immediately very slight massage is used and after a few minutes the patient is asked to move his toes. Gradually as massage is being employed he is encouraged to move his joint and within a quarter of an hour he can generally extend and flex his joint pretty freely. He is later encouraged to put his foot to the ground and to try to walk.

The above can be carried out by the patient's friends after the surgeon's visit each day. Very few cases are not almost entirely better within a week; most of them are within a few days. The last case I had happened on a Sunday night. There was a tear in the outer side of the capsule with a well-marked depression and the man was at his work on the Tuesday with only slight lameness.

The same treatment is employed in recent dislocation; from the very first the joint is moved. I have only seen half-a-dozen cases of dislocation of the shoulder within the last six years and all have been treated as above without any bad consequences. None have recurred and no weakness has been left in any of them. No bandaging is employed, but a sling may be used for a few hours if the pain is great. There is no troublesome stiffness and the cases give no bother. A restaurant keeper a month ago had a subglenoid dislocation which I reduced with a little difficulty. He walked home about a quarter of a mile without any sling and was told to move his arm gently if it was painful. Next day he moved it quite freely, although I did not let him put it above his head. The only pain he had was in the pectoral muscle and it was very slight. When I saw him next day he moved it in every direction and was at his work frying fish.

I am, Sirs, yours faithfully,

Galashiels, Feb. 5th, 1898. WM. DOIG, M.D. Edin.

"LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES."

To the Editors of THE LANCET.

SIRS,—Assuming for the moment for "those who wish to deal earnestly with the problems of medical reform" that Mr. Horsley's interpretation of the present Medical Acts is the correct one and that the man in the street is not entitled to practise, and further that the obvious inference to be drawn from Section 6 of the Medical Act, 1886, is that any person not on the Register should be prosecuted, one is at

once driven to look through the Acts for the penal clause or clauses to insist upon the fact, if possible, that such person shall not practise, and what do we find? Section 40 of the Act of 1858 which in effect provides that a man can be prosecuted who fraudulently represents himself to be what he is not. Inferences may be drawn and one may contend that a practice or a procedure is wrong in the abstract even by statute, but unfortunately an Act of Parliament is hardly a problem of Euclid and unless there exists some concrete means of suppressing the evil such philosophic contentions become a mere ploughing of the legal sands.

Mr. Horsley admits that it is most difficult under present conditions to obtain a conviction; indeed, judicial decisions seem to indicate that "a legally qualified practitioner" means a person registered under the Act privileged to recover fees, to claim immunity from serving on juries, &c., to hold public medical appointments, and—the irony of it—to sign death certificates, but not a person alone privileged to practise medicine. Undoubtedly "all that is apparently wanted is a slight re-arrangement of words," making it penal for anyone other than a registered person to practise for pay medicine, surgery, or midwifery. It is gratifying, therefore, to observe that the Council of the British Medical Association have appointed a sub-committee, in which Mr. Horsley is included, to draft a new Medical Bill. If the General Medical Council itself will not move in the matter and seek the aid of a Government Bill to provide it with the powers to carry to its logical conclusion its recent action in suppressing unqualified practice within the ranks to the suppression of a worse kind of practice outside the profession, it will remain for some private member to introduce a Bill; and in such case the rank and file of the profession, independent of its supposed corporate representation, will have to back it in the various constituencies; for it may be pointed out that Members of Parliament having had their attention drawn to a private Bill (even though giving no pledge) would be more likely to attend the House and hear what is to be said for a private Bill on which they have information than for one of which they have no knowledge.

Those who, like Mr. Carter, take up the position of *laissez-nous faire* seem to assume that the ardour of medical reformers is solely due to the idea of financial gains to the practitioner, whereas it is the chief contention of reformers that a State recognition for its own purposes only—i.e., to hold Poor-law appointments—is a very tardy recognition of an honourable and hard-working profession wherein it is no uncommon occurrence for its members to be informed by their own patients that they have been, are, or intend going to some unqualified person or so-called specialist on the eye, ear, or bones—such is the popular ignorance on the subject. Medical reform is no party question; it is a cause common to both political parties—to the one side which claims so many suggestions as reform and to the other as a conservation of all that is good and true, purged from the shameful degradation of unscrupulous quackery, in the art and science of healing.

I am, Sirs, yours, faithfully,

Leeds, Feb. 5th, 1898. J. H. WIGHAM.

"THE LEGAL POSITION OF THE GENERAL MEDICAL COUNCIL AND THE MEDICAL DEFENCE UNION."

To the Editors of THE LANCET.

SIRS,—I gratefully acknowledge the kind things said by Dr. A. G. Bateman about myself, but I must point out that his defence of the practice of the Medical Defence Union is a quibble. That the General Medical Council is a court of law, whatever be its peculiarities, whatever its special and wholly unparalleled powers may be, has been fully decided by judges on appeal. If we grant that it meets Dr. Bateman's definition, a "domestic forum," that only establishes its "forensic" position, as Dr. Bateman may see if he turns up Smith's Dictionary. Such institutions were not unknown in this country before the establishment of this medical law court. A consistory court is a purely "domestic forum," so is the court of a diocesan chancellor, so is a bishop's inquiry, so is the Court of Arches—and for that matter so is the Divorce Court. Before all these bodies persons may conduct their own cases; but wise men employ professional assistance. In the days of my presidency of the Medical Defence Union, when, it seems, many wise and good things were done, a standing counsel was appointed and he has never been removed from his office so far as I have heard. I submit that it is his right to appear before the General Medical Council in such cases as have of late been conducted by the secretary of the Union; and as the Union is acting so stringently in the suppression of irregular medical practice I again appeal for its more considerate and more just behaviour to a sister profession, in which the evils of overcrowding are even more bitterly felt than in our own.

I am, SIRS, yours faithfully,

Birmingham, Feb. 5th, 1898. LAWSON TAIT.

To the Editors of THE LANCET.

SIRS,—By a clerical error a whole sentence and part of another were left out of my letter in THE LANCET of Feb. 5th. The last sentence should have read: "It was considered by the Council of the Medical Defence Union some years back—Mr. Lawson Tait being president—that the charges of 'covering' and unprofessional conduct could be presented before the General Medical Council better by a medical man than by a solicitor and the experiment was tried in a notorious case, and having succeeded I was directed by the Council to continue to appear 'on behalf of the Union.'" To those conversant with the procedure of the General Medical Council at penal inquiries the disadvantages of appearing by either counsel or solicitor are at once apparent. Lawyers require certain weapons which they are accustomed to use in the courts and without these they are almost powerless. The policy thus initiated by the Union during Mr. Tait's presidentship has been continued up to the present time and will be continued as long as these "inquiries" are made before a "domestic forum." If in a future Medical Act the General Medical Council should obtain authority to turn itself into a "legal tribunal" and possess all the attendant rights and privileges peculiar to a court of law, then it will be, of course, necessary to instruct either counsel or solicitors to appear in support of the charges incidental to these penal cases.

I am, Sirs, yours faithfully,

A. G. BATEMAN.

Devonshire-street, Portland-place, W., Feb. 9th, 1898.

"THE PATHOLOGY AND TREATMENT OF GOUT."

To the Editors of THE LANCET.

SIRS,—Dr. A. P. Luff, in his exceedingly able and interesting article read before the Harveian Society of London on Jan. 6th and published in THE LANCET of Jan. 15th, states that the condition called *gout* is due to a deposit of biurate of soda in the connective tissues of the body. This compound is derived from the union of sodium quadriurate with some of the sodium carbonate of the blood. The sodium quadriurate is a salt circulating abnormally in the blood owing to deficient excretion of uric acid by the kidneys. Dr. Luff writes as follows: "(1) In all cases of kidney disease (not associated with gout) in which the blood has been examined for uric acid that body has been found present, showing that when the excretory function of the kidneys is interfered with absorption of uric acid into the general circulation occurs; (2) uric acid deposits are frequently found in the joints at the post-mortem examination of subjects of kidney disease who have never been known to suffer from ostensible gout during life." This was the case in 20 out of 26 cases of granular contracted kidney disease in which no ostensible gout was observed during life, as stated by Dr. Luff in his Goulstonian Lectures of last year.

Now, if in numerous cases of kidney disease uric acid is found during life in the blood and if further in such cases uric acid deposits are frequently discovered in the joints after death, how is it that no ostensible gout is observed during life? Surely this discrepancy goes to prove that something more than the presence of uric acid in the blood and its settling in the joints is necessary in order to produce gout. What this further condition is it is not for me to theorise, but Dr. Luff's premises certainly to my mind strengthen the theory held by many that uric acid in the blood and connective tissues is merely a by-product of the obscure condition of the system called gout.

I am, Sirs, yours faithfully,

Toronto, Jan. 26th, 1898. R. D. RUDOLF, M.D. Edin.

AN INSIDIOUS FORM OF "COVERING."

To the Editors of THE LANCET.

SIRS,—Much has been said and written of late respecting the abolition of the unqualified assistant and also the act of "covering" unqualified practitioners by qualified men. There is to my mind yet another phase of this question which it would be well for the General Medical Council to consider—that is, the covering of unqualified practitioners under the name of midwives by qualified men. A case has recently come under my care by being asked to call at once to a house. On my arrival I found it to be a case of labour and, to use the midwife's expression, "her patient was having a difficult time." This unqualified woman had been in attendance for three hours and had succeeded in pulling off one arm of the child, and it was only after having done this that she discovered it was not a leg and this caused her to send for me. It was with some difficulty that I was able to deliver the patient of a full term male child minus one arm and of course dead from hæmorrhage. Although I have attended this case without any hope of fee or reward I feel conscious of having violated one of the laws of the General Medical Council and rendered myself liable to be struck off the Register, for it is entirely by the aid of other qualified practitioners and myself in the neighbourhood that this unqualified woman is able to continue to carry on the practice of midwifery for gain and I have no hesitation in saying that she gets a good living at it. I am not in favour of the employment of unqualified assistants, but I do think that the time has arrived when unqualified practitioners of midwifery should be abolished as well as those of medicine and surgery.

I am, Sirs, yours faithfully.

Portsmouth, Feb 7th, 1898. RICHARD EMMETT.

THE EPIDEMIC AT HATTON ASYLUM.

To the Editors of THE LANCET.

SIRS,—In reply to your letter concerning the epidemic at Hatton Asylum I herewith submit to you the following facts:—

All the food used at the ball was cooked on the asylum premises. No tinned food of any description was used. All the meat and poultry came off the asylum farm and was all slaughtered on Jan. 18th and 19th. The rabbits, of which only thirty were used, were shot during the four days prior to the ball and were cooked by the housekeeper, remaining for twelve hours in earthenware pans and seasoned prior to being made into pies on the 20th. The following is a list of various articles of food on the supper tables: Beef, ham, tongue, rabbit-pie, pork-pie, goose, chicken, tipsy cake, jelly, blancmange, mince-pies, beer, lemonade, tea and coffee and bread. Of 61 attendants and servants who have had the disease 5 ate beef, 23 ate ham, 10 ate tongue, 10 ate rabbit-pie, 7 ate pork-pie, 21 ate goose, 23 ate chicken, 17 ate tipsy cake, 30 ate jelly, 18 ate blancmange, 12 ate mince-pies, 37 drank beer, 35 drank lemonade, 26 drank tea and coffee, 39 ate bread.

Presuming that the epidemic was due to ptomaine poisoning it is evident that all the food was in a diseased state, even to the jelly and blancmange, as some of these sixty-one attendants ate no meat whatever and three of them were not at the ball and had no food from it. The outbreak commenced on Jan. 13th and has continued up to yesterday, Feb. 7th. Fourteen cases occurred prior to the 21st, on the 22nd there were 29 cases, on the 23rd 47, on the 24th 21, on the 25th 23, on the 26th 12, on the 27th 13, since which date there have been 26. The medical staff of the asylum have attended 185 cases, of which 85 were lunatics, the remainder being employed in various departments, some residing at their own homes.

The disease has been remarkably sudden in its onset. Vomiting and diarrhœa have been present in nearly all cases (some, however, have had no abdominal symptoms whatever), severe rigors, pains in the back and limbs, high temperature (reaching 103° and 104° F.). Sudden crises, in many cases accompanied by profuse perspiration, have been the general characters of the disease; among other symptoms may be mentioned coryza, pains at back of eyes, severe headache, and sleeplessness. The vomited matter has in nearly all cases contained bile and a marked icteric tinge has been noticed in many cases. The duration of the disease has been about a week, but some of the earlier cases have not yet recovered. All have complained of feeling great weakness and lassitude after the attack. For some hours after the crisis the majority of temperatures have been subnormal to the extent of 1° to 2°. I hold abundant proof of the infective nature of the disease. I know it existed here and at a neighbouring asylum prior to the 21st ult. and I also know that influenza of a marked type was in the room on the night of the ball. I know of similar cases in other parts of the country.

The above-mentioned facts have led me to form the opinion that the disease is influenza. Gastric influenza is reported from the Continent but personally I have not seen what I have thought to be cases of this disease prior to the outbreak. In fairness to myself I should like it stated that with the exception of the editor of one local paper who applied to me for information per telephone and the editor of one medical journal who made full inquiry here concerning the outbreak, neither myself nor my assistants have been asked to state anything concerning the disease whatever it might be; all the news which has been supplied to the public has been fabricated in Warwick and elsewhere. Asylums and their officials are never treated fairly by the lay press and I am never foolish enough to expect it. The present case is no exception. I have had the law (per the coroner) and the press have the profits.

I am, Sirs, yours faithfully,

ALFRED MILLER,

Hatton Asylum, Feb. 8th, 1898. Medical Superintendent.

*** We are much obliged to Dr. Miller for this letter, which seems to us to dispose of the view that the epidemic was due to ptomaine poisoning.—ED. L.

CORONERS AND MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—That you deserve thanks for calling attention to the remarks made by the coroner over the case at Attercliffe Common everyone connected with the profession will admit. Too often this is the tone adopted by coroners towards medical men and were it only the particular medical man concerned who suffered this would be bad enough; unfortunately this is not the case, the evil is far reaching, for these remarks are made in open court, where a large proportion of the people are perhaps uneducated, and therefore such opinions have greater weight than if expressed before an audience the majority of whom are persons of education and refinement. Hearing a man express such views, can we wonder that bone-setters and herbalists are so largely resorted to by the working classes? And if such insults as that offered by the coroner in this inquiry to the medical profession be allowed to pass unnoticed, is it any wonder that the profession generally fails to occupy the status that it deserves? That it does not do so is a fact which none will, I believe, challenge.

With regard to the inquiry at Attercliffe Common itself, surely it cannot be regarded as settled—i.e., if the object of the inquiry really be to determine the cause of death—for here we have a man qualified to give a scientific opinion stating his belief to be that the cause of death was phthisis, this opinion being deliberately set aside by the coroner for that of some women absolutely uneducated and unskilled in medicine, surgery, and pathology. Surely a proper representation to the Home Secretary or the Lord Chancellor would be quite sufficient to cause the inquiry to be reopened and so a proper conclusion as to the cause of death arrived at.

I am, Sirs, yours faithfully,

Feb. 9th, 1898. FREDERICK BROOKE.

"THE WHOLE QUESTION OF NURSING."

To the Editors of THE LANCET.

SIRS,—In justice to the Incorporated Medical Practitioners' Association, I must ask your permission to make a short reply to the letter which appeared in your columns on Feb. 5th over the signature of G. B. Hudson. I learn from his letter that he is a Member of Parliament—a fact which, if I may quote his own words, "is quite unknown to the general public."

Your readers doubtless wondered what was the object of

his communication to your columns. I would venture to cast a little light upon the obscurity by expressing my humble opinion that Mr. Hudson would be acting more wisely if he persuaded certain members of the staff of the Middlesex Hospital to meet at once the demand which has been publicly made and reiterated during the last six months for a public inquiry into their mismanagement of the Royal British Nurses' Association, a body which he goes out of his way to eulogise.

In your Editorial note to this letter you, Sirs, state that the views of the leaders of the Medical Practitioners' Association "must be received with caution." Those views have been clearly set forth on many occasions in print, and are as follows: That nurses should be properly trained for the responsible duties they are required to fulfil; that they must work under the direction and control of medical men and not as independent practitioners; that at present nurses and midwives are, to a large extent, untrained, and are almost entirely uncontrolled; and that this state of affairs is dangerous to the public and most detrimental to medical practitioners. I much regret to find that you consider that these "views must be received with caution."

I am proud to know that the Association of which I have the honour to be president is slowly but surely arousing the medical profession to the great truths that in self help and union are to be found the best, the most manly, and therefore the most certain remedies for the many difficulties and drawbacks from which medical men suffer. The Association has never yet claimed to speak for the "whole of the profession." I cannot, therefore, consider it generous upon your part to deny our right to a claim which we have never made. At the same time I may assert with some confidence that recent events have proved that the Association—even at this early stage of its career—possesses the support and the confidence and expresses the views of a very considerable section of the profession.

I am, Sirs, yours faithfully,

HUGH WOODS,

President of the Incorporated Medical Practitioners' Association.

Highgate, N., Feb. 8th, 1898.

*** We desire to point out to Dr. Hugh Woods, that, firstly, we have *not* made the general statement he attributes to us and that, secondly, we have *not* denied the right of his Association to any claim, whether made or not by the Association. Mr. G. B. Hudson, M.P., asked us a definite question—if we considered the Incorporated Medical Practitioners' Association "entitled to speak authoritatively in the name of the medical profession." To this we gave the only truthful answer, and no one who takes the trouble to read Mr. Hudson's letter intelligently can possibly see anything ungenerous in our statement. Dr. Hugh Woods would better consult the dignity of his position and the welfare of his Association by infusing a colder accuracy into his accusations.—ED. L.

THE ACCIDENTS OF VACCINATION.

To the Editors of THE LANCET.

SIRS,—A distressing case of post-vaccinal erysipelas which has just come under my observation prompts me to ask once more in the columns of THE LANCET whether it is not desirable and practicable to take some further steps to lessen the chances of similar disasters? The State ordains that for the good of the individual and the community a certain inoculation should be practised. The operator satisfies himself that the inoculation is successful, but after that the State takes no further interest in the matter and the wounds are left to heal up as best they may subject to the chances of various contaminations. No doubt these disasters are infrequent, but when they occur they make an indelible impression on a more or less considerable section of the community. It is useless to explain that the vaccination was not the direct cause but that the erysipelas might just as well have followed a cut or a scratch. It is these preventable accidents which are responsible for very much of the feeling against vaccination and very naturally so too.

Is it not the duty of the State, having carried out the operation, to see that the wounds heal up under proper conditions?

I am, Sirs, yours faithfully,

T. COLCOTT FOX.

Harley-street, W., Feb. 5th, 1898.

DR. CLIFFORD ALLBUTT'S "SYSTEM OF MEDICINE."

To the Editors of THE LANCET.

SIRS,—Might I venture to make the suggestion to Professor Clifford Allbutt that he should bring out a tropical edition of his great "System of Medicine"—that is, one volume which would contain all the articles on tropical diseases? Such a book would have a ready sale among men in tropical countries who shrink from adding five or six heavy volumes more to their book box, already heavy and costly enough to carry about on frequent transfers.

I am, Sirs, yours faithfully,

CIVIL SURGEON.

Buxar, India, Jan. 13th, 1898.

THE ARTIFICIAL LIGHTING OF HOSPITAL WARDS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give us advice with regard to the artificial lighting of the two wards of a small hospital? There are in each ward five beds ranged along one wall; the fireplace is in the centre of the opposite wall and at present there is a two-arm bracket with ordinary batswing burner over the fireplace. The windows are at either end. The wards are about fourteen feet across, lofty and well ventilated. It has been proposed to fix two brackets with incandescent burners on the wall against which the beds are ranged, but there is some doubt as to the healthiness of these burners. Unfortunately electricity is out of the question.

I am, Sirs, yours faithfully,

H. P. H.

Feb. 7th, 1898.

*** Our opinion on the Welsbach Incandescent Gas patents was based on exhaustive trials[1] and was very favourable to this system of lighting. Our experiments showed the illuminating power of the mantles to be very high and the fouling of the atmosphere trifling—much less than is usually caused by lighting with gas. After-events have proved the accuracy of our report to which we refer our correspondent.—ED. L.

THE PLAGUE IN INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

THE municipality of Bombay is still strongly supporting the inoculations of M. Haffkine. Further stations have been opened and large numbers of people of all classes are being daily inoculated. There is still, however, the same passive opposition on the part of the Plague Committee to these measures. The chairman of the committee has recently written stating that the committee cannot undertake to encourage inoculations for the purpose of exempting persons from detention in quarantine or segregation camps. It is difficult to understand the opposition of the Plague Committee. If there were any mistrust that bribery might interfere with legitimate inoculations there are now plenty of British medical men to perform and record the inoculations. The statistics already published showing the result of M. Haffkine's prophylactic measures have not been questioned and the observations establish the preventive power of inoculation beyond any possible doubt. The municipality has had an offer from Professor Lustig for his assistant to visit Bombay and employ his curative serum. This has been accepted. It will be remembered that the serum claims to be curative rather than prophylactic like the serum of M. Haffkine. From a cultivation of plague bacilli in agar of which the virulence is known a substance can be procured which, inoculated into animals in small quantities, makes them refractory to the most dangerous forms of infection. From animals thus two or three times vaccinated we can obtain a serum with, it is said, a decidedly curative and preservative action. Of seven very serious cases

[1] See Report of THE LANCET Special Analytical and Sanitary Commission on the Incandescent System of Gas Lighting, THE LANCET, Jan. 5th, 1895.

treated in Bombay six patients recovered and only one died. At Lanouli sixteen cases were treated and twelve patients recovered. These figures are much too limited to be of any value. What the details of the preparation of Professor Lustig's serum may be is not stated, but that of M. Yersin, which was tried without success last season, takes many months to prepare. It is understood that M. Haffkine abandoned the preparation of a curative serum and subsequently devoted his attention to the production of the prophylactic serum which has now passed its trial. Considerable interest, therefore, attaches to the proposed remedy, but it must be admitted that with only these few facts about the new serum before it the municipality has taken a step in the dark. The weekly death-rate of Bombay has risen from 1307 to 1540. The mortality is now more than double the normal. Six hundred and fifty-one deaths were registered as due to plague. The plague mortality was distributed as follows:—

		Ratio of mortality.
Mahomedans	88	115 per 1000
Jains	51	185 ,,
Low-caste Hindoos	49	145 ,,
Brahmins	40	88 ,,
Hindoos of other castes	379	87 ,,
Parsees	23	69 ,,
Other various	21	—
Total	651	

There has been a curious omission to notify deaths from relapsing fever. It has been undoubtedly prevailing for some weeks past in an epidemic form, because one of the contagious diseases hospitals has a hundred beds occupied with these cases. The usual mortality is said to be from 8 to 12 per cent. The registration returns are so faulty that very little reliance can be placed upon them. The hospital returns, however, are accurate. Deaths from relapsing fever must be returned, therefore, under a wrong and misleading head. It is highly undesirable that such a very infectious and wide-spreading disease as relapsing fever should be absolutely disregarded in registration. It is, moreover, very questionable whether a plague hospital is the most desirable place for the treatment of relapsing fever.

Jan. 21st.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Royal Infirmary.

MR. RALPH BROCKLEBANK, the honorary treasurer, in presenting his annual statement to the trustees at their recent meeting said that the most noteworthy feature of the year was the increased amount of work in all the departments, but chiefly in that devoted to surgical casualties. An average of 248 beds had been occupied, which exceeded the average of previous years. During the later months the demand for admission had been so great as to tax to the utmost the resources of the hospital. Financially the position had not materially changed; the expenses had exceeded the income by £2000 and they again commenced the work of the year indebted to their bankers. Not more than one-fifth of the expenses had been derived as income from invested securities. The President deeply deplored the fact that so little fresh support was obtained for the maintenance fund, which was gradually diminishing and which could not last much longer, even with the most careful management. That the hospital was worked on the most economical lines was shown by the fact of its occupying the lowest average per bed of any other provincial hospital having a medical school attached with the exception of one. Allusion was also made to the new horse ambulance which was being provided by the City Council to serve the district of which the infirmary was the centre.

Liverpool Infirmary for Children.

The forty-sixth annual report stated that the number of patients treated during the year 1897 amounted to 1196 in-patients and 14,211 out-patients. The financial condition of the charity was unsatisfactory in that the income from all sources had fallen short of current expenses by £540. The deficiency had been met to some extent by drawing on the suspense account and instead of a debit balance of £802 16*s.* 1*d.*, as there otherwise would have been, there remained a debit of £242 16*s.* 1*d.* All legacies having been expended there remained now no reserve to meet pressing needs. 194 children had been sent to convalescent homes during the year.

Birkenhead Borough Hospital.

The report for the past year showed that increasing usefulness characterised the work of the institution. In the year 1837, when there was no building and with a borough population of 6000, the subscriptions only yielded £68, whereas last year the subscriptions from a population of 120,000 amounted to £973. The expenditure reached £3246 and the number of separate cases dealt with were 10,581, of which 792 were in-patients, with an average stay of eighteen days each. The treasurer deplored the decrease of subscriptions which had once more fallen below £1000 and that both ordinary and workmen's contributions were lower than last year, a fact which might be accounted for by reason of the engineers' strike. Sympathetic reference was made to the late Mr. John Laird, who was one of the warmest supporters of the charity.

Feb. 9th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Annual Meeting of the Governors of the Royal Infirmary, Newcastle-upon-Tyne.

AT a largely-attended meeting of governors held in the library of the Royal Infirmary on the evening of Thursday, Feb. 3rd, at which the Right Worshipful the Mayor presided, the report showed a considerable increase in the amount of work done, more especially in the special and out-door departments, and an excess of expenditure over income of £3414, notwithstanding the fact of there having been an increase in income of nearly £400. In seconding the adoption of the report Mr. Alderman W. D. Stevens drew attention to the large excess of expenditure over income, which certainly is a serious condition of things, particularly in view of the contemplated addition of 120 beds in the new building. It is evident that the working-classes, for whose benefit the infirmary mainly exists and who are taking every year a more active part in its administration, will have themselves to a large extent to provide the funds for carrying on the work of the infirmary on the larger scale proposed. The working-classes are well able to support the infirmary themselves unassisted, and if a very small proportion of their money which is frittered away in strikes were devoted to the purpose they would do so. Speaking of the new infirmary Mr. Stevens said he had been told by an experienced man that the cost of a new infirmary need not be more than £300 per bed. Exception was taken to this by Mr. Riley Lord, who pointed to Liverpool and Birmingham and gave it as his opinion that a first-rate infirmary, such as Newcastle meant to have, could not be built for any such sum. Mr. Stevens further remarked that a Newcastle architect would be as competent to build the new infirmary as any in the country—an opinion that is shared by a very large number of the subscribers to the Riley Lord Fund.

The Infirmary Nurses' Home, Newcastle-upon-Tyne.

Mrs. Albert Lord, an ex-mayoress of Newcastle, on Thursday, Feb. 3rd, formally open the new home in Ravensworth-terrace. For the furnishing of this home the nurses and the infirmary are indebted to Mrs. Lord and a committee of ladies, who raised nearly £400 for the purpose. In declaring the home open Mrs. Lord made some kind and sensible remarks upon nurses and their arduous calling.

The University of Durham and its Penal Powers.

The university has not been long in putting into operation its lately acquired power. On Tuesday, Feb. 1st, Convocation revoked the degrees in arts, medicine, and science conferred upon a graduate who had been convicted of a crime and whose name in consequence had been removed from the Medical Register by the General Medical Council.

Dearth of Subjects for Dissection.

Great inconvenience has been experienced lately at the University of Durham College of Medicine on account of a dearth of subjects for dissection. Formerly the supply used to be ample but for some reason or other it has fallen off. Owing to the exertions of the professor of anatomy, Dr. R. Howden, the Unions of Tynemouth and South Shields have consented

to hand over the bodies of unclaimed paupers dying in the respective workhouses to the college authorities in accordance with the provision of the Anatomy Act which empowers them to do so. An application made to the Sunderland Union of a similar character to that addressed to Tynemouth and South Shields on Thursday, Feb. 3rd, has been refused by the guardians. If the difficulty in obtaining subjects should continue not only here but at the medical schools generally it would seem to be desirable to take the power to dangerously interfere with the education of the medical profession out of the hands of guardians and by procuring an alteration of the Anatomy Act compel them to carry out its intention.

Feb. 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

THE financial statement for the session 1896-97 shows the following sums as paid to the respective occupants of the chairs in the Faculty of Medicine: Medicine, £800; Natural History, £806; Forensic Medicine, £600; Clinical Surgery, £320; Clinical Medicine, £432; Chemistry, £1300; Physiology, £1100; Anatomy, £1645; Materia Medica and Therapeutics, £780; Botany, £830; Surgery, £800; and Midwifery, £700. The number of students matriculated during the session was 1871, including 249 women.

Dr. McCall Anderson on Hospital Abuse.

At the annual meeting of the subscribers to the Royal Hospital for Sick Children, Glasgow, held on the 19th inst., the adoption of the report was moved by Dr. McCall Anderson, who spoke at some length upon various questions of hospital policy. He expressed a very decided opinion that there were a not inconsiderable number of instances in which patients who were in good circumstances received at the hospitals gratuitous advice and treatment and he urged that more care should be taken to inquire into the position of those applying to the medical charities. To admit these comparatively well-to-do persons was to act against the interests of the poor for whom the hospitals were really provided. In dealing with the question of subscribers' "lines" Dr. Anderson argued that these were inconsistent with sound hospital policy and that the only recognised claims for admission should be illness and poverty. He was glad to know that the distribution of "lines" in connexion with the Sick Children's Hospital was a declining quantity and he trusted that ere long they would be entirely abolished. The report announced a considerable increase in the number of students attending the practice of the hospital, a fact doubtless due, at least in part, to a recommendation by the University Senatus to medical students to attend a practical course on the diseases of children. Another feature of the report not without interest is the statement that for six vacancies in the nursing staff there were no less than 162 applications. The accounts for the year show a deficit of £1639.

University of Aberdeen.

At the last meeting of Aberdeen University Court the Lord Rector, the Marquis of Huntly, reported that an anonymous donor had offered to subscribe £10,000 to the university buildings extension fund, on condition that Government give a further grant of £20,000, and that if in any way possible the older portion of Greyfriars Church shall be retained. The court agreed for their part to accept the offer and to communicate it to the Executive Committee. It was also resolved to communicate the offer to the town council of Aberdeen, at the same time expressing the strongest hope that they will fall in with the donor's wishes and agree to give the old building of Greyfriars Church to the University with a view to its restoration and incorporation for academic purposes. It was also stated that the Chancellor of the Exchequer has consented to receive a deputation early—probably next week—on the subject of an additional grant from the Treasury. The Executive Committee have since met. Objections were urged as to the condition respecting old Greyfriars Church, but no definite resolution has yet been arrived at by the committee. The Senatus has resolved that the wearing of a scarlet gown with velvet collar and a trencher shall in future be obligatory in the case of arts students. The Students' Representative Council has agreed to this regulation as to "academic costume" and it has also been arranged between the two bodies that the Lord Rector's address shall be delivered in November next.

Aberdeen Royal Infirmary.

The report for 1897 shows that the cost of the Jubilee extension scheme has been £70,955 19*s.* 6*d.*, while that of the new convalescent hospital has been £4706 14*s.* 6*d.* The enlarged hospital provides accommodation for about 230 patients. The total number of in-patients treated last year was 2177 and the cost per bed £51 14*s.* 5*d.* The out-patient department shows a large increase—5557 as compared with 3249 in 1896. The total income for the year was £7954 and the expenditure £9176, but the debt on the building account has been reduced by £1907 from special payments. The numerous changes in the staff are also referred to. The number of patients admitted to Lochhead House and the new convalescent hospital during the year was 175, the same as in 1896.

Aberdeen Hospital for Sick Children.

The number of patients treated last year in this hospital was 678 and about £1000 are required to complete the nurses' home now in course of erection and to extend the washing and laundry accommodation. Miss Katharine M. Lumsden, honorary superintendent, has organised a bazaar for October next with a view to raising this sum.

Death of J. C. G. Duffus, M.A., M.B., C.M. Aberd.

Much regret is felt in professional circles in Glasgow at the unexpected death of Dr. Duffus who only a few months since left the city with a view to practise in London. Dr. Duffus was a graduate of the University of Aberdeen, where he took his degrees both in arts and medicine with first-class honours. Shortly after commencing practice in Glasgow he was appointed one of the assistant surgeons to the Royal Infirmary and the value of his teaching in the outdoor clinic was highly appreciated. Both by his patients and his professional brethren he was highly esteemed.

Feb. 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

A NUMBER of candidates, including three ladies, have entered their names for the examinations for the Fellowship of the College to commence on Feb. 21st. There is at present but one lady Fellow of the College—E. Winifred Dickson, M.D. R.U.I.

The Memorial to the late Mr. Stamer O'Grady, F.R.C.S. Irel.

A meeting of the promoters of the memorial to Mr. E. S. O'Grady was held on Feb. 2nd at the Royal College of Surgeons, Dublin. Sir George Duffey filling the chair. The report of the executive committee appointed in November last was read, and Dr. Edward Hamilton, in moving the adoption of the report, stated that several suggestions had been made as to the particular form the memorial should take, including one in favour of a public ambulance, another for the establishment of a prize in the College, and a third for the construction of a public fountain in the city. Mr. D. B. Sullivan, Q.C. seconded the motion, which was adopted. After some discussion it was unanimously resolved that the erection of a public fountain in some suitable situation would best indicate the benevolent character of the late Mr. O'Grady, and hand down to posterity the appreciation of the community of his services to the poor and to his profession.

Mercer's Hospital, Dublin, again in Trouble.

At the quarterly meeting of the Dublin Corporation held on the 7th inst. the town clerk read a letter from the registrar of Mercer's Hospital stating that the governors regretted their inability to elect as governors the three representatives of the corporation nominated by the council. A resolution that the matter be referred to the Finance and Leases Committee, with a recommendation that the grant to the hospital be withheld until the nominees of the corporation be elected governors, was proposed and seconded and after some discussion adopted. If this resolution be acted upon the institution will lose the annual grant of £350 from the corporation.

The Ulster Medical Society.

At the monthly meeting of the Ulster Medical Society,

held on Feb. 3rd (Dr. J. A. Lindsay, president, in the chair), Dr. Calwell showed a girl with a peculiar nervous affection of the arm. Professor Byers showed a multilocular ovarian tumour, one cyst of which was dermoid and contained a pultaceous mass of epithelium, hair, fat, and sebum. Dr. John Campbell showed a specimen of malignant disease of the uterus. After the exhibition of specimens an interesting discussion on appendicitis was opened by Dr. Darling (Lurgan), who related particulars of a recent case. The following members took part in the debate: Professor Sinclair, Dr. John Campbell, Dr. Calwell, Dr. McKisack, Professor Byers, Dr. Mitchell, Dr. Gaussen, and the President. The general tendency of the discussion was to show that the great majority of cases recovered under medical treatment, but that when an abscess formed, or in recurring cases, surgical interference was demanded, although the results of operation in cases in which during an attack of appendicitis there was sudden perforation into the abdominal cavity were not sufficiently good to warrant this plan being recommended as a routine practice. The next meeting of the society will be a pathological one to be held in the laboratory of Queen's College.

The Belfast Maternity Hospital.

The annual meeting of this hospital was held on Feb. 1st, and from the report it appears that during the last year 302 patients were delivered in the hospital and 173 in their own homes. Owing to the large number of patients and the crowded state of the house the question of rebuilding the hospital is being considered. Financially, there is a balance on the debit side. A new maternity hospital would cost £6000, and it is said that there are already promises of £1000.

The Royal Victoria Hospital, Belfast.

The City Corporation of Belfast are at present promoting a Bill to enable them to grant a site—a portion of the present asylum grounds—to the new Royal Victoria Hospital, and at their meeting on Feb. 1st a resolution was proposed that there should be inserted in this Bill an additional clause to grant the sum of £5000, being equivalent to the value of the site of the new Mater Infirmorum Hospital, to that institution. This, however, was not carried, those opposing it doing so on the ground that the Mater Infirmorum Hospital was denominational while the Royal Victoria Hospital was for all classes, with a board of management representative of all creeds and with doctors of all religions. Further, it was thought that if this grant were made to the former hospital all the other hospitals in the city would demand to be subsidised. A small sub-committee has been deputed by the executive committee of the Royal Victoria Hospital to consider the question of the choice of an architect for the new hospital and to report on this question to the central committee. It has been decided that the architect shall not be selected by open competition.

Public Bacteriological Examinations in Belfast.

The Corporation of the City of Belfast have taken a very judicious course (on the recommendation of the Public Health Committee) in appointing Dr. Lorrain Smith, of Queen's College, Belfast, to conduct examinations for the Public Health Department when required on typhoid fever, diphtheria, tuberculosis, &c., the total payments for one year not to exceed £100.

Influenza in the North of Ireland.

The epidemic of influenza is still very prevalent in Belfast and the north of Ireland. A great many of the cases, especially in young people, are of the gastro-intestinal type, the onset being very sudden with vomiting and sometimes diarrhœa, and accompanied with high fever. There are also cases of the ordinary broncho-pneumonic type, but the severe nervous cases are much less frequent than in former epidemics.

Death of Dr. Ringrose Atkins.

The almost sudden death of Dr. Ringrose Atkins, medical superintendent of the Waterford Lunatic Asylum, was heard of with great regret not only by medical men, but by the general public of the South of Ireland. Last Tuesday he was apparently in his normal health and went to visit a patient. Before leaving the house of the patient he became suddenly attacked by violent pain and with difficulty was able to return to his residence. He was promptly seen by Dr. Mackesy and Dr. Friel and later by his brother, Dr. Thomas G. Atkins, of Cork, but in spite of all their anxious and assiduous care he gradually sank and expired on Friday morning. His death was caused by kidney disease and obstruction of the bowels. Dr. Ringrose Atkins was a distinguished student of the Queen's College, Cork, and afterwards obtained his M.A. degree as well as his degress in Medicine and Surgery at the Queen's University of Ireland. In the year 1873 he was appointed assistant resident medical superintendent at the Cork District Lunatic Asylum and five years later was promoted to the important post of resident medical superintendent of the Waterford Asylum. The pathology of the various brain diseases had a great fascination for him. He was a frequent contributor to the medical journals and as he had come to be regarded as an authority on alienist subjects he was always listened to with great attention when he took part in the debates in the psychological section at the annual meetings of the British Medical Association. He was also well known and highly appreciated as a popular lecturer. He travelled abroad every year, took photographic views of various places of interest, and on his return delivered lectures illustrated by lantern exhibitions. He attended the International Medical Congress at Moscow and only a few weeks ago lectured in Cork before a very large audience giving his impressions of the manners and customs of the Russian people. A thoughtful observer of men and things he was ever ready to devote his talents to bettering the position of his neighbours. He was a warm advocate of the temperance movement, and it was well known that he took the kindliest and most zealous interest in the poor mentally afflicted creatures in the asylums over which he presided with such distinguished ability. He died at the comparatively early age of fifty, and the large and representative gathering at his funeral testified to the great esteem in which he had been held.

Feb. 9th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Vaccines of Definite Chemical Composition.

M. PHYSALIS, an account of whose work appeared in my letter in THE LANCET of Jan. 1st, gave some more particulars of his researches at the meeting of the Academy of Medicine on Jan. 31st. He had already shown, he said, that cholesterine and biliary salts when inoculated had a preventive action against the toxic effects of the poison of the viper. But it had been suggested that these products were perhaps not quite pure and owed their action to the presence of ferments. So he had repeated his experiments with vegetable cholesterine and with biliary cholesterine specially prepared by Professor Arnaud, of the Museum. Identical results were obtained. He had also made experiments with pure re-crystallised tyrosine (*a*) from the carrot, (*b*) from dahlia tubers, and (*c*) from albuminoid animal matter. In all three cases protection from the effects of serpent venom was complete, and the juices of the dahlia acted in the same way. He considered that it was evident, therefore, that vegetables contained prophylactic "vaccinal" substances and that in many instances these "vaccines" were bodies of definite chemical composition.

Action of the Toxin from Eel Serum.

M. Mosso has established the poisonous qualities of the blood of the eel, and in addition M. Richet has shown that it is possible to "vaccinate" an animal against these effects if one begins with a very small dose of blood and gradually increases it until a dose which would have been fatal if injected at first is reached. At the meeting of the Academy of Sciences held on Jan. 31st M. Camus and M. Gleyout showed that the toxicity resides in the serum and that it acts in the following way: it breaks up the blood-corpuscles and causes the hæmoglobin to be extravasated into the tissues. This action takes place even *in vitro*, but in the blood of animals immunised by M. Richet's method the hæmoglobin was retained by the corpuscles both in the vessels and *in vitro*.

Repair of the Walls of the Bladder.

At the meeting of the Academy of Medicine held on Feb. 1st, M. Cornil showed two dogs in which he had been able to verify the mode by which repair takes place in the wall of the bladder after an operation wound. In the first

dog an incision five centimetres in length had been made in the bladder. Ten days later the edges of the linear wound were so well united that there remained only the faintest scar but the great omentum was adherent in the line of the suture. In the second dog a portion of the bladder had been completely removed by a circular incision and the great omentum was united with catgut to the opening in the bladder. At the end of ten days the wall of the bladder in this case also was completely restored by the peritoneum. M. Cornil concludes that as wounds of the bladder heal with such extraordinary rapidity in these animals they would under equally healthy circumstances do so in the same way in man.

The Treatment of Tuberculosis of the Genito-urinary Organs.

It is true, said M. Desnos, at the meeting of the Therapeutical Society held on Jan. 25th, that local treatment must not be forgotten in tuberculous affections of the genito-urinary tract and that it is a useful and even indispensable adjuvant, but the really important thing is the general treatment. As a part of this hygiene occupies the first place, for all patients placed under favourable climatic conditions show great improvement. If the case is one of those showing a tendency to hæmorrhage a high altitude is most suitable. The seaside is suitable for those cases where the genital apparatus is affected, but is harmful for those where the urinary organs are chiefly involved. In congestive forms arsenical waters are useful. As to diet everything which tends to irritate the urinary tract must be avoided, so no beer or other alcoholic liquors should be taken. A milk diet is useless except in the case of acute cystitis. Over-feeding gives good results, and from a therapeutic point of view creasote and guaiacol are the best drugs to use.

Re-opening of the Pasteur Laboratory at Constantinople.

The bacteriological laboratory founded by Pasteur at Constantinople by request of the Sultan has just re-opened its doors after a long interval of idleness due to the incompetency and carelessness of the State officials and from want of funds. The French Chargé d'Affaires, M. de la Boutiniere, protested from his point of view, while the Imperial Society of Medicine addressed a strong protest from their point of view, to the Palace. In this way the attention of the Sultan was drawn to the precarious state of an institution in which he has always taken the greatest interest. Orders have been issued that Dr. Nicolle shall want for nothing in future and every possible guarantee has been given to him that such shall be the case. It is therefore considered that the work of the institution will be greatly developed.

Feb. 8th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Government and the Privat-Docents.

THE Government intends to modify the position of the *privat-docents* at the universities. Hitherto the practice has been that young men who have already distinguished themselves by scientific work have to ask their respective faculties to be admitted as *privat-docents*. They have to present to the dean an essay on a special subject (the so-called habilitations-schrift), and in the event of the faculty deeming them fit to become members of the teaching staff they are authorised to lecture. There is nothing exceptional in either their rights or their duties and they are under the jurisdiction of the university in cases of ethical misdemeanour without any interference on the part of Government officials. In this way men of the most diverse political opinions become permanently attached to the universities and *privat-docents* have sometimes been prominent in opposition to the Government. Although no inconvenience has arisen from the present state of things the Government is now endeavouring to obtain a power of control over the *privat-docents*. It has been induced to take this course by the fact that a *privat-docent* of the Faculty of Philosophy in Berlin has proved to be one of the most fervent Social Democratic leaders in this city. The Government endeavoured to remove him but the attempt was foiled by the firm attitude of the faculty, which rightly believed that Social Democratic opinions did not prevent a man from being an able teacher of mathematics or medicine. Although the *privat-docents* are not State officials at all the new Bill proposes to deal with them as if they were appointed and paid by the Government. The faculties will continue to have jurisdiction over them, but the Public Prosecutor, if not satisfied with the decisions of the faculties in cases where complaints have been made against the *privat-docents*, may appeal to the high court, which decides questions of discipline affecting State officials. In this way the *privat-docents* will be brought into a position of dependence on the Government to the great prejudice of academical liberty. The Bill has therefore met with general disapproval among university men. Nearly all the professors of the four faculties of the Berlin universities have petitioned Parliament to reject it and the rectors of the universities will meet in Berlin to discuss the measures to be taken under the circumstances, fearing, as they do, that this act of aggression may be followed by others which will in course of time have the effect of destroying the old-established self-government of the universities.

Resignation of Professor Esmarch.

Professor Esmarch, of the University of Kiel, is about to resign the chair of Surgery, which he has occupied since 1857. He is known throughout the world by his treatise on military surgery, which has been translated into nearly every civilised language, and by his invention of artificial anæmia. He is one of the most experienced military surgeons, having taken part in no less than four great wars—in 1848, 1864, 1866, and 1870. He began his academical career as *privat-docent* at the University of Kiel and assistant to the late Professors Langenbeck and Stromeyer. As he had been a surgeon in the Revolutionary army of Schleswig-Holstein in 1848 the Government of Denmark, to which Kiel then belonged, refused for some time to appoint him professor at the university, but his nomination was eventually consented to in 1857.

The Congress of Internal Medicine.

This congress will meet this year in Wiesbaden under the presidency of Dr. Schmidt, the well-known laryngologist of Frankfort. The principal subjects of discussion will be: Clinical Education, by Professor von Ziemssen, of Munich, and Professor von Jaksch, of Prague; Intestinal Auto-infection and Intestinal Antiseptics, by Professor Müller, of Marburg, and Professor Brieger, of Berlin; Treatment of Diabetes, by Professor Leo, of Bonn; the Bacillus of Syphilis by Dr. van Niessen, of Wiesbaden; Artificial Dilatation the Stomach, by Dr. Weinhand, of Wiesbaden; Chroni Muscular Affections of the Heart, by Dr. Schott, of Nauheim Medical men desiring to become members or to take part in the proceedings should apply to Dr. Pfeiffer, permanent secretary to the congress, at Wiesbaden. The congress will open on April 13th.

The International Congress of Hygiene and Demography.

The German branch committee of this congress, which will meet in Madrid from April 10th to 17th, has recently been formed. Besides a great number of hygienists, statisticians, sanitary engineers, &c., the following prominent medical men have been elected members of the committee: Dr. Pistor, of the Royal Prussian Government medical department; Dr. von Coler, general-staff-surgeon of the Army; Professor Baginsky, Professor Günther; Professor Guttstadt; Dr. Köhler, president of the Imperial Health Office; Professor Lassar, Dr. Strassman; and Dr. Wehmer, chief medical officer to the Berlin police. All the foregoing are members of the profession in Berlin. The committee will also include: Dr. von Esmarch, of Königsberg; Dr. C. Fränkel, of Halle; Dr. Loeffler, of Greifswald; Dr. Wolffhügel, of Göttingen; Dr. Aub, and Dr. Buchner, of Munich; Dr. Gaffky, of Giessen; Dr. Reineke, chief medical officer to the town of Hamburg; and many others. The congress will no doubt be attended by a large number of German hygienists and medical men.

Feb. 7th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The English-speaking Practitioner in Italy.

THE Santini Bill for the exclusion from Italy of all practitioners who do not possess an Italian diploma was on the 2nd inst. brought before the Chamber of Deputies in an interpellation from its promoter, who asked Signor Arcoleo,

Under Secretary of State for the Home Department, whether the Government had not given an assurance to certain of these practitioners that none of the steps contemplated in the Bill would be taken against them. To this Signor Arcoleo replied that the number of foreign physicians practising in Italy is no more than 108; that the Government intends either to rescind or partially to restrict, according to circumstances, the right of these to practise; and, in any case, to make provision that in foreign countries Italian physicians shall have facilities for practising similar to those hitherto enjoyed by foreign physicians in Italy. In other words, "rather than limit the right to practise heretofore accorded to foreign practitioners, he would secure a reciprocal privilege in favour of Italian physicians practising in other countries." Dr. Santini expressed himself as not satisfied with this answer. One hundred and eight do not represent the number of foreign practitioners in Italy. Fifteen hundred would be nearer the mark, though (he alleged) not more than one hundred of these "sono muniti di regolare diploma" (are furnished with a proper qualification). He deplored what he stigmatised as the Government's apathy in a matter affecting the interests of the profession in Italy. In other states, he continued, medical practitioners of foreign nationality have, before they can practise, to pass "serii esami nella lingua del paese" (serious examination in the language of the country), "while with us they can attend patients without let or hindrance," and moreover "non pagano la imposta di ricchezza mobile" (do not pay income-tax). Dr. Santini, in his zealous advocacy of "protection for Italian medicine," forgets many things; he also makes an egregious blunder in asserting that the foreign practitioner does not pay income-tax. The contrary is the fact, the English-speaking practitioners paying income-tax on annual receipts arbitrarily fixed by the Ricchezza Mobile Office, contributing thereby to the Italian exchequer more money in the form of income-tax than all the Italian practitioners put together. It is this consideration, coupled with others familiar to the readers of THE LANCET, that explains the exceedingly guarded and, from Dr. Santini's point of view, "unsatisfactory" answer given to interpellations like the above by successive leader-secretaries of State like Signor Arcoleo and Signor Serena before him. Indeed, the Santini Bill session after session appears to be relegated to the Greek Kalends and English-speaking practitioners establish themselves in Italian winter cities as if it had never been brought before the Chamber of Deputies.

The Maragliano Serum in Tuberculosis.

On Saturday, the 5th inst., was opened in the Piazza Capranica an institute for the supply of this serum gratuitously to the poor. Its chief promoter is Dr. Silla Passarini who, on a tour of the Italian centres of population where tuberculosis is most frequent, had his own convictions as to the efficacy of the serum confirmed by leading practitioners in those centres and accordingly found the time ripe for such a dispensary in Rome as would place the prophylactic and curative virtues of the preparation within reach of the humblest. Dr. Passarini with a staff of assistants will undertake the consulting practice of the institute and be responsible for the diagnosis of the cases in which the serum is specially indicated, while Professor Maragliano volunteers the gratuitous supply of the serum in whatever quantities it may be called for. The initiative thus taken is a noble one and at the inaugural proceedings the large attendance of leading consultants, teachers, and practitioners attested the due appreciation of it on the part of the profession. Its extension to other Italian cities can hardly fail to follow and with the experience thus to be obtained Professor Maragliano anticipates a still further advance on the lines he has worthily laid. Nowhere more than among his compatriots has he found severer critics, but the rise of the Institute in the Piazza Capranica may be taken as significant that opposition has passed its acute stage and that, to use Baccelli's words, the Maragliano serum has at length vindicated "its right to citizenship" in the medical commonwealth.

The Third Italian Geographical Congress.

Your readers should know that on April 12th will commence in Florence the Third Congress of the Geographical Association throughout Italy. The programme is a highly interesting one and will be especially rich in the experiences of Italian explorers, medical and other, in the Dark Continent. The occasion will be utilised to celebrate the quatercentenary of the two great geographers, navigators, or discoverers, Toscanelli and Vespucci, of whom some novel and striking relics will be on view in the museum attached to the congress. Festivities lasting till the 27th will also be set on foot, adding a further attraction to the city of Florence at a season when she usually shows to best advantage.

Feb. 6th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Action Against a Medical Man.

ON Dec. 17th, in the Supreme Court of Victoria, was concluded an action of great interest to the profession. Mr. Richard Lethbridge attempted to recover £5000 damages from Dr. Hugh Boyd, of Bendigo, for alleged unskilful treatment. On April 26th, 1896, the plaintiff had a fall from a bicycle and injured his shoulder. He at once consulted a medical man, who administered an anæsthetic and placed the arm in a sling, saying that it had been dislocated and that he had reduced it. The plaintiff, being of opinion that his arm was broken, was not satisfied and went to Dr. Hugh Boyd, who also gave an anæsthetic and said there was a fracture of the surgical neck of the humerus. He distinctly felt crepitus and the patient's sister also heard the crepitus. The arm was put up as a fracture. On May 26th a consultation was held with Dr. Atkinson and the arm was examined under chloroform. The bone had united in good position. There was no dislocation and no sign of any other abnormality. The reason for having a consultation was that it had been stated that the patient had a dislocation which had not been treated. Dr. Boyd said the last time he saw the plaintiff's arm was on June 1st, when he removed the bandages, and his account was only made out to June 6th. The plaintiff said he had seen Dr. Boyd several times between June and December and complained of pain in the shoulder and Dr. Boyd had told him to use it. Between June and December he had used it, riding a bicycle and using dumb-bells. He also had massage, of which Dr. Boyd approved. Dr. Boyd said that subsequently to June 6th he only saw the plaintiff casually and in the course of conversation about mining reference was made to the arm. On Jan. 7th the plaintiff came to Melbourne and consulted Mr. O'Hara, who diagnosed a sarcoma of the upper end of the humerus and amputated at the shoulder-joint. The plaintiff claimed that Dr. Boyd ought to have diagnosed the sarcoma and that had he done so earlier the plaintiff would have been saved much suffering; he did not claim that the arm could have been saved. An examination of the specimen showed that the whole of the surgical neck was occupied by a mixed cell sarcoma and the medical witnesses called on both sides admitted that it was impossible to say whether the neck had been fractured or not, but that a fracture might have occurred and united and the evidence of it been obliterated by the invasion of the sarcoma, as it was maintained for the defence had actually been the case. Counsel for the plaintiff insinuated that the medical evidence was biased in favour of Dr. Boyd and made capital out of the fact that several of the medical witnesses were members of the Medical Defence Association and that one of them, Professor Allen, had refused to lend a specimen from the Museum at the Melbourne Medical School for use in the preparation of plaintiff's case, asserting that he regarded the case as an iniquitous one. The judge in summing up said the jury must be guided by the evidence of the medical experts and he thought the jury would say that the leaning that the medical witnesses would have to a brother practitioner, whom they might, rightly or wrongly, consider unjustly attacked, would not warp their judgment, and that their sense of honour was not so dull and their self-respect so poor that they would say what they believed to be false because they thought a brother practitioner unjustly assailed. The judge further charged the jury that Dr. Boyd was not answerable for the occurrence of a disease which might have been latent at the time of the fracture or might have been caused by it, but if he was called upon to observe the patient and was informed of symptoms which should show a trained mind that there was something wrong in addition to the fracture, then he could not get rid of his liability by saying that his last

charge for professional attendance was on June 1st. The jury returned a verdict for Dr. Boyd.

Unusual Case of Poisoning by Sewer Air.

In driving a tunnel in connexion with the sewerage works now in progress in Melbourne foul air was met of such a deadly character as to cause the death of five workmen. The tunnel was through soft silt and sand on the bank of the river, which has been soaked with drainage for years. Some time ago the contractor and foreman of the works were nearly suffocated by the gases escaping from the soil, and Dr. Charles Bage, who attended them, described the symptoms produced in a paper in the November number of the *Intercolonial Medical Journal*. He concluded that the gases present were marsh gas, sulphuretted hydrogen and carbonic acid. On the present occasion the contractor had forbidden the men to go down, but three of them went to get some tools left in the tunnel and the other men went to rescue them. Several rescue parties of firemen in smoke jackets were beaten back by the gases in attempting to remove the dead bodies. Finally, the tunnel had to be flooded with water and the bodies were brought out by divers. At the inquest Dr. Neild, who made the post-mortem examination, said that death was due to suffocation from breathing irrespirable gas which was, he thought, chiefly carbonic acid.

Maintenance of Border Hospitals.

The hospitals on the border between New South Wales and Victoria receive patients from both colonies but are maintained by the colony in which they are situated. Correspondence has recently taken place between the respective Governments of the two colonies with a view of more equally distributing the cost of maintenance. It has been decided to leave things as they are, as it appears that while patients from Victoria are treated in the hospital at Albury, in New South Wales, quite an equal number of patients from New South Wales are treated in the hospitals at Swan-hill, Echuca, and Bendigo in Victoria.

Jan. 1st.

Obituary.

EDWARD LUND, F.R.C.S. ENG.

MR. LUND, of Manchester, who died on Feb. 4th at his residence in Victoria-road, Whalley Range, must be reckoned among the most distinguished of contemporary surgeons and had the further good fortune to bear a part in raising the Manchester Medical School to its present high position. Although he had lived in Manchester for fifty years and had done all his important work there, so that his name was associated with that of the city in the minds of those who knew him mainly by reputation, he did not belong to a local family, but was the ninth son of Mr. Thomas Lund, of Peckham, in Surrey. He was born on May 23rd, 1823. When he arrived at an age to make choice of a profession he was apprenticed to Dr. William Parker Hoare, of Faversham, in Kent, and subsequently entered as a student at Guy's Hospital in 1842. On the completion of his medical course he became qualified in 1847 as M.R.C.S. Eng. and L.S.A., and in 1848 he came to Manchester, where his surgical talents found ample opportunity for their development and ultimately obtained a gratifying recognition. In 1849 Mr. Lund married, his wife being Charlotte, youngest daughter of Mr. D. W. Webster, of Kirby, Northampton. In 1850 he was made anatomical demonstrator in the medical school which was at that time established in Pine-street. In this capacity and in his subsequent appointment as lecturer on anatomy at the same school his high qualifications as a teacher were so conspicuous that he contributed materially to the success of the institution. Not only had he the invaluable faculty of imparting knowledge, but his personal characteristics rendered him so popular with the students that they made him a presentation in the middle of February, 1854, at the Queen's Hotel, Piccadilly, Manchester. An account of the proceedings is given in THE LANCET of Feb. 25th, 1854. Mr. T. Turner, the founder of the school, and at that time one of the lecturers, presided, and among the other lecturers present were Dr. Renaud and Dr. Browne, Mr. Heath (who acted as vice-chairman), Mr. Childs, and Mr. Smith. Mr. J. Done, on behalf of the subscribers, including some old as well as present students, presented to Mr. Lund a handsome twenty-three days' timepiece and an address engrossed on vellum. Upon a plate affixed to the timepiece was the following inscription: "Presented to Edward Lund, Esq., M.D., M.R.C.S., L.A.C., by the students of the Royal School of Medicine and Surgery, Manchester, as a slight testimonial of their esteem and regard." The address referred to Mr. Lund's uniform kindness, urbanity, and indefatigable exertions in his capacity as lecturer; to the self-sacrificing spirit he continually manifested by devoting very much time, other than that occupied by his lectures, in order to urge the pupils forward and to facilitate their progress; and to the deep interest he evinced in the students' private affairs and his anxiety to aid them on every possible occasion with his advice and counsel. In 1855 he was elected dispensary surgeon to the Manchester Royal Infirmary with care of a district and applied himself with the utmost assiduity to his new duties, which included the treatment of out-patients and the instruction of students in the details of minor surgery as exemplified in the cases which came under his hands. In 1857 the arduousness of the work was lightened by an arrangement which relieved the dispensary surgeons from visiting patients at their homes. In 1863 he became F.R.C.S. Eng. by examination. When the Pine-street and Chatham-street schools were amalgamated Mr. Lund became a member of the teaching staff of the Manchester Royal School of Medicine and with characteristic energy laboured to advance its interests and give it prestige, a work in which he had the coöperation of Mr. Turner, Mr. Smith, and Mr. Southam. In 1868 he became full surgeon to the Royal Infirmary on the retirement of Mr. Ransome and shortly afterwards he took an active part in bringing about the union in 1872 of the Medical School and Owens College, which had the effect of giving a great impetus to medical education in Manchester. When the amalgamation took place he and Mr. Southam became joint professors of surgery and in 1874 he was admitted to the Senate of Owens College. After Mr. Southam's death Mr. Lund was in 1877 appointed sole professor of surgery in Owens College, discharging the duties of the chair until his resignation in 1888. His power of exposition, his indomitable energy, and his wide practical experience combined to render his lectures extremely valuable and to enhance the reputation of Manchester as a centre of medical education. Mr. Lund had the great merit of having been one of the first to recognise the immense practical importance of Lord Lister's employment of antiseptics in operative surgery. Those whose recollection extends back for five-and-twenty years will remember the sarcasm and denunciation which many surgeons thought it not unbecoming to shower on the new system, but in Manchester Lord Lister had an adherent whose reputation and influence were very valuable in bringing about the acceptance of antiseptic surgery in that part of England. Mr. Lund's skill as an operator and his ingenuity in devising methods of treatment contributed largely to his success both as a teacher and a practitioner.

Mr. Lund was a member of the Council (Section V., Surgery) of the International Medical Congress held in 1881 and in the same year he was chosen to be the President of the Lancashire and Cheshire Branch of the British Medical Association. In 1881 he was also elected a member of the Council of the Royal College of Surgeons of England and in 1885 he was appointed Hunterian Professor at the College and also one of the examiners. His examinership and his seat on the Council were resigned in 1887 on account of the weak state of his health. In 1882 he resigned his position as surgeon to the Royal Infirmary and was thereupon appointed consulting surgeon. In 1883 he delivered an address before the Medical Society of London on "The Present Aspect of the Antiseptic Question."

Mr. Lund was the author of a number of articles on surgery and allied subjects. The first of his various contributions to our own columns was on "A New Method of Injecting Subjects for Anatomical Purposes." It was commenced in THE LANCET, June 24th, 1854, p. 659, and was continued in a subsequent number. In 1877 he published "Internal Urethrotomy, with its Modern Improvements." Of late he suffered from pulmonary congestion and cardiac dilatation, which compelled him to abstain from work for the last three months and resulted fatally, notwithstanding the devoted attention of his friend, Dr. J. Dixon Mann, and other kindly sympathisers. Mr. Lund leaves three sons and a daughter. The funeral took place at the Southern Cemetery and was very largely attended both by acquaintances and friends and by representatives from various institutions with which the deceased had been connected.

Medical News.

UNIVERSITY OF LONDON.—The following candidates were successful at the Intermediate Examination in Medicine in January :—

ENTIRE EXAMINATION.

First Division.—Thomas Crisp English and Lawrence Jones, St. George's Hospital; William Henville Lowman, King's College; and Hackworth Stuart, University College.

Second Division.—Frederick Cecil Edgar Atkinson, St. George's Hospital; Percival George Albert Bott, St. Mary's Hospital; David Leighton Davies, University College; Frederick Walter W. Dawson, Westminster Hospital; Louis Edington Dickson, University College, Liverpool; Harold Augustus Easton, St. Thomas's Hospital; Sarah Louise Fraser, London School of Medicine and Birkbeck Institute; George Henry James Hooper, Charing-cross Hospital; Francis Musgrave Howell; St. Bartholomew's Hospital; Joseph Klein, St. Mary's Hospital; Charles James Izzard Krumbholz, University College; Richard Horace Paramore, St. Bartholomew's Hospital; Hilda Mallinson Rowntree, London School of Medicine and Royal Free Hospital; Harry Scholefield, Owens College; Charles Duncan Soutter, Mason College; William Lumsden Stuart, King's College; John Tattersall, St. Mary's Hospital; Herbert Terry, Owens College; Robert Cyril Turnbull, London Hospital; John Ernest Utley, Owens College; Kathleen Olga Vaughan and Blanche Elinor Walters, London School of Medicine for Women; and Sydney Rice Williams, Bristol Medical School.

EXCLUDING PHYSIOLOGY.

Second Division.—James Connor Maxwell Bailey, St. Bartholomew's Hospital; Anthony Birch, St. Mary's Hospital; Robert Harrison Birtwell, B.A., London Hospital; Hans Frederick William Boeddicker, Mason College; Robert Culverwell Bowden and Allen Bathurst Brown, St. Bartholomew's Hospital; William Collings Dawson, Mason College; Alice Debenham, London School of Medicine for Women; Sydney Hunt, St. Thomas's Hospital; Ernest Thomas Jensen, Guy's Hospital; Ambrose Hilton John, St. Bartholomew's Hospital; David Thomas Cadvan Jones, University College; Ernest Williams Jones, Mason College; John Tyley Montgomery McDougall, Guy's Hospital; Annie Mooney, London School of Medicine for Women; Daniel Leigh Morgan, Guy's Hospital; Eugene Michael Niall and Thomas Massey Pearce, St. Bartholomew's Hospital; Arthur Pearson, Guy's Hospital; Mary Elizabeth Phillips, University College, Cardiff; Mary Ariel Stewart, London School of Medicine for Women; Frederick George Thompson and William Arthur Trumper, St. Mary's Hospital; Ernest Wethered, St. Bartholomew's Hospital; Percy Walter White, Bristol Medical School; and Gisela Wilmersdoerffer, London School of Medicine and Birkbeck Institute.

PHYSIOLOGY ONLY.

First Division.—Alfred John Vernon Betts, Westminster Hospital; John Ellis Chapman, University College, Sheffield; Lewis Cook, Westminster Hospital; Alfred Gordon Ede, St. Bartholomew's Hospital; William Ferris, St. Mary's Hospital; Brinley Richard Lloyd, Cardiff Medical School; David Thomas Price, Bristol Medical School; Arthur Tregelles Pridham, St. Bartholomew's Hospital; and Percy Taylor R. Stedman and Charles Wynn Wirgman, University College.

Second Division.—Josephine Brown, London School of Medicine for Women; Walter Seymour Danks, St. Bartholomew's Hospital; Margaret Bernard Dobson, London School of Medicine for Women; Charles Edward Etheridge, Middlesex Hospital; Cecil Scarlett Frost and Thomas Hall Gandy, St. Bartholomew's Hospital; Alfred Jones, London Hospital; Patrick Thurburn, Guy's Hospital; James Cole Marshall, St. Bartholomew's Hospital; Michael Foster Reaney, London Hospital; William Edward Ruttledge, University College; Mary Ethel S. Scharlieb, B.A., London School of Medicine for Women; Francis Williams Sheppard, St. Bartholomew's Hospital; Nigel Frampton Stallard, University College; and Alfred Bertram Vine, Middlesex Hospital.

THE ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The usual monthly meeting of this society was held on Feb. 7th at Leicester-square. The minutes of the previous meeting were read and confirmed.—The Curator showed a piece of an Elephant's Tusk which had a leaden bullet embedded in the substance of the ivory. The lead and ivory were in close contact.—Mr. F. W. Barrett showed a Skull of an Indian from the region of Vancouver's Island. The teeth showed signs of much attrition, the mandibular molars on the left side having the pulp chambers laid bare by the destruction of tissue proceeding at a greater rate than the formation of secondary dentine. In the majority of the teeth, although they were worn down below the level of the pulp chambers, secondary dentine had formed and so protected the living pulps.—Some discussion ensued, in which Mr. Baldwin, Mr. H. Lloyd-Williams, Mr. Ashley Barrett, and Mr. F. J. Bennett took part, the point in question being the probable cause of the extensive loss of the tooth tissue.—Mr. Albert read a paper on the Sulpho-cyanide of Potassium in Saliva, which we shall publish in an early issue.—The paper was discussed by Dr. Buckmaster, Mr. Kenneth Goadby, and Mr. F. J. Bennett.—The meeting was then adjourned.

THE Queen has sent a present of game for the use of the patients in the City of London Hospital for Diseases of the Chest of which Her Majesty is Patron.

TYPHOID FEVER IN THE THORNBURY RURAL DISTRICT.—At the meeting of the Thornbury Rural District Council held on Feb. 4th Dr. Bond, the medical officer of health, informed the council that seventeen cases of typhoid fever had occurred at Tytherington since Jan. 21st. It was decided to have the isolation hospital at Alveston made ready for the reception of cases.

DRAMATIC PERFORMANCES AT CLIFTON.—The week commencing April 18th has been selected for the second "amateur week" at the Prince's Theatre, Clifton. The Bristol Amateur Operatic Society will produce *The Gondoliers* and *The Mountebanks*, giving two performances of each. Dr. Lionel Weatherly will arrange for two performances of *Arrah-na-Pogue*. The profits will be divided between the following Bristol medical charities—Infirmary, General Hospital, Children's Hospital, Eye Hospital, and Dispensary.

FREEMASONRY.—*Rahere Lodge, No. 2546*.—An ordinary meeting of this Lodge was held at Frascati's Restaurant, Oxford-street, W., on Feb. 8th, the Worshipful Master Bro. W. J. Walsham being in the chair. Bro. Morrison was admitted to the second degree. Messrs. Edward Carnall and S. S. Hoyland were initiated into Masonry and Bro. G. W. Micklethwaite, of the Isaac Newton University Lodge, No. 859, was elected a joining member. The Lodge voted a sum of thirty guineas to the forthcoming Royal Masonic Institution for Boys' festival of the centenary.

LITERARY INTELLIGENCE.—A series of finely coloured drawings of various skin diseases is at present being published under the superintendence of Dr. Martin Chotzen of Breslau. The full title of the work is "Atlas der Syphilis und Syphilisähnlichen Hautkrankheiten für Studirenden und Aerzte" (Atlas of Syphilitic Skin Diseases and Affections which Resemble Them, for Students and Practitioners). It will be completed in twelve monthly parts, the sixth of which has just appeared, and it will contain 109 drawings arranged in 72 plates (77 drawings of syphilitic and 32 of non-syphilitic conditions). The price of each monthly part consisting of six plates and the explanatory letterpress is three marks (3*s.*). The publishers are Leopold Voss, of Hamburg and Leipzig, and Max Nessel, of Neue Schweidnitzer Strasse, Breslau.

ROENTGEN SOCIETY.—At a meeting of this society held on Feb. 1st the secretary read a communication from Mr. Marsh (Northwich) drawing attention to a small round spot the size of a shot over the head of the fifth metacarpal in a radiogram he had taken. He had taken the same hand seven months previously and at that time thought the mark due to a defect in the plate.—Mr. Baker had observed a similar appearance and other members pointed it out on various radiograms. No explanation was given.—Dr. Walsh read a paper on Periosteal and Other Soft Tissue Shadows. He described a series of experimental exposures from the soft tissues of the tibia and ankle of the ox. Periosteum differed in density from various parts of the same bone and was especially dense over strong muscular insertions. It was relatively a very opaque tissue. Thus a strip of the thickness of ordinary brown paper threw a shadow equal to that of half an inch of tough tendon. A photograph of a forcibly fractured caudal vertebra showed the periosteum stripped from the free ends for several millimetres. Obviously such a record where obtainable must have a surgical value. The ligaments of strong joints were specially dense to the rays.—Dr. Walsh also discussed the "Singing Anode," which he thought might be traced to two causes—one a mechanical rattle and the other a molecular hum due to the passage of an alternating current through the tube.—Mr. Mackenzie Davidson demonstrated his Localisation Apparatus and Methods, which have been already published. He gave the results of some valuable and suggestive researches into the definition of tubes. By placing a chequered wire screen in front of a pencil of focus-tube rays he showed that the dark shadows ran in the direction parallel to the pencil, while those transverse to the latter were either obscured or altogether blotted out. It is difficult to estimate the possibilities unfolded by this observation of what Mr. Davidson has named the "astigmatic shadow."

THE APOTHECARIES' HALL OF IRELAND.—The following candidates have passed at the January examinations and completed their First Professional Examination: John Thompson, Francis G. Adye-Curran, and Lewis Farrell. Second Professional Examination: William P. Harding (passed in Materia Medica and Physiology).

BRISTOL HEALTH COMMITTEE.—At a meeting of the Bristol Health Committee held on Feb. 1st the sub-committee appointed to consider the appointment of an assistant medical officer of health decided to recommend the council to appoint a medical superintendent of hospitals distinct from the medical officer of health or an assistant. They recommended that the appointment of the latter should be deferred for the present.

BRITISH DENTAL ASSOCIATION.—The British Dental Association will hold its annual meeting in Bath on Saturday, May 28th, when the retiring President, Mr. R. T. Stack, M.D. (T.C.D.), F.R.C.S. Irel., of Dublin, will deliver his address. The President-elect is Mr. W. A. Hunt, M.R.C.S. Eng., L.R.C.P. Lond. The mayor will give a reception in the Roman Promenade in the evening and other features have been arranged for the meeting, which will conclude on the following Wednesday.

ROYAL INSTITUTION.—At a general monthly meeting of the members of the Royal Institution held on Feb. 7th, Sir James Crichton Browne, M.D. Edin., F.R.S., treasurer and vice-president, presiding, the special thanks of the members were returned to Mrs. Tyndall for her donation of £1000, presented "for the promotion of science" in the name of the late Dr. John Tyndall, D.C.L., F.R.S. Thanks were also returned to Sir Frederick Abel, Sir Andrew Noble, and Professor Dewar for donations to the fund for the promotion of experimental research at low temperatures. It was announced that the centenary of the Royal Institution would be celebrated next year.

NORTH OF ENGLAND GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY.—The annual meeting of this society was held at Owens College, Manchester, on Jan. 21st, the senior vice-president, Dr. Lloyd Roberts, being in the chair until the election of Dr. J. W. Martin, of Sheffield, as president, who then took the chair. The following gentlemen were elected office-bearers for the year:—President: Dr. John W. Martin, Sheffield. Vice-presidents: Dr. T. A. Helme, Manchester; Dr. D. Lloyd Roberts, Manchester; Dr. John Wallace, Liverpool; Dr. T. B. Grimsdale, Liverpool; Dr. Jas. Braithwaite, Leeds; Mr. Chas. Richardson, Leeds; Mr. G. E. K. Thorpe, Sheffield; and Mr. J. Benson, Sheffield. Hon. treasurer: Mr. J. Nelson Cregeen, Liverpool. Council: Mr. Owen Bowen, Liverpool; Mr. H. Briggs, Liverpool; Dr. Archibald Donald, Manchester; Mr. Richard Favell, Sheffield; Dr. W. E. Fothergill, Manchester; Mr. D. L. Hamilton, Manchester; Dr. H. Harvey, Wavertree; Dr. Arnold Lea, Manchester; Dr. H. A. Lediard, Carlisle; Mr. T. D. Leigh, Liverpool; Dr. T. W. Napier, Egremont; Dr. J. J. O'Hagan, Garston; Dr. Benjamin Scott, Manchester; Dr. W. Japp Sinclair, Manchester; Dr. David Smart, Liverpool; Dr. A. Stookes, Liverpool; Mr. E. W. Thomson, Sheffield; Dr. A. J. Wallace, Liverpool; Dr. W. K. Walls, Manchester; Dr. W. Walter, Manchester; Dr. A. E. L. Wear, Leeds; and Dr. R. E. Williamson, Leeds. Honorary general secretary: Dr. J. E. Gemmell, Liverpool. Honorary local secretaries: Dr. John Scott, Manchester; Mr. W. Fingland, Liverpool; Mr. Edward O. Croft, Leeds; and Dr. Hugh Rhodes, Sheffield.—Dr. Walter (Manchester) showed: 1. A Fibroid the size of a pigeon's egg removed on Jan. 17th from the anterior lip of the cervix uteri. The patient, aged forty-eight years, had suffered from menorrhagia for eight months, until which time the catamenia had been regular. 2. A Fibroid removed from the fundus uteri by vaginal hysterectomy on Jan. 10th from an unmarried patient, aged thirty years, who for eighteen months had been losing flesh and strength consequent on metrorrhagia and excessive pain. Anterior colpotomy was first performed and the front wall of the uterus divided from the cervix upwards with a view of removing the tumour by *morcellement* and then closing the uterus. Owing, however, to the tumour being firmly embedded in the fundus and great difficulty in traction being experienced on account of extreme narrowness of the vagina it was found necessary to resort to hysterectomy. This was rendered possible by bisecting the lower two-thirds of the posterio wall of the uterus as well as the anterior. Part of the tumour was then removed by *morcellement*, the remainder by enucleation. The uterus being now divided into separate halves was removed after ligation of each broad ligament. The wound and vagina were packed with iodoform gauze and the after-progress of the case was uneventful.—Dr. Alexander (Liverpool) read a paper on the Enucleation of Multiple Uterine Fibroids, and Dr. Lloyd Roberts, Dr. Walter, and Dr. Donald took part in the discussion which followed.

SHEPTON MALLET DISTRICT HOSPITAL.—The annual meeting of this hospital was held on Jan. 29th under the chairmanship of Sir R. H. Paget, Bart., President. The report showed a deficit of £56 as against £17 on the previous year. There were 141 in-patients treated against 140 in 1896, and there were also 111 out-patients. It was stated that the income from all sources was £433 and with most careful economy there was a permanent expenditure of about £460 per annum.

UNIVERSITY OF CAMBRIDGE.—G. Elliot Smith M.D. Sydney, advanced student of St. John's College, has been approved by the Degree Committee for the B.A. degree in virtue of his original researches on the anatomy of the brain. Dr. Arthur Willey has been re-elected to the Balfour Studentship for another year. Mr. H. E. Durham has been appointed a representative of the University at the International Congress of Hygiene and Demography to be held in April at Madrid. Lord Lister has been appointed an Elector to the Professorship of Surgery, Dr J. F. Payne an Elector to the chair of Pathology, Sir William Turner an Elector to the chair of Anatomy, Professor Schäfer an Elector to the chair of Physiology, and Lord Walsingham an Elector to the chair of Comparative Anatomy and Zoology.

THE CORPORATE AND MEDICAL REFORM COMMITTEE.—A meeting of the Executive Committee was held on Saturday, Feb. 5th, Dr. T. Granville Hockridge being in the chair. The committee passed resolutions thanking the Parliamentary Bills Committee of the British Medical Association, and particularly Mr. G. Brown, Dr. Shuttleworth, Mr. Victor Horsley, and Mr. Parkinson, for the action taken on the memorial of this committee inviting the association to take the lead in measures to secure the reforms desired by the profession, but that a letter be written to point out that the chief object (the coördination of the action of the profession) is not dealt with and to suggest that the sub-committee invite the coöperation of all the Direct Representatives and of public bodies in the profession obtaining power, if necessary, for the purpose. It was resolved also to invite the Direct Representatives to take steps by way of requisition to convene a special meeting of the General Medical Council to consider the matters dealt with in Mr. Victor Horsley's report to the registered practitioners of England and Wales.

THE WATER-SUPPLY OF BISHOP AUCKLAND.—This populous town in the county of Durham is supplied with water from the River Wear. The county council some months ago represented to the Local Government Board that the water was impure and that it was very dangerous to continue its use. The board has declined to take any action. Within the last five years the board have had several public and other inquiries with regard to the water-supply in consequence of complaints. "In 1891-92 the Local Government Board sanctioned the application of the urban sanitary authority for the borrowing of £12,000 for increasing the supply from the Wear, which at that time was, and still is, grossly polluted by rain-sewage within a few miles of and above the intake. In July, 1893, the county council as a result of a report of their medical officer of health on an epidemic of typhoid fever in Bishop Auckland, which he attributed largely to the polluted water-supply, made a representation to the Local Government Board as to the dangerous quality of the water-supply to the town." This led to an inquiry by the board but nothing resulted. In June, 1896, after another public inquiry, the board refused to sanction further expenditure and advised that the district council should cease to draw its water-supply from the River Wear and procure it from the Shildon Water Company. The district council refused to follow this advice. Two applications have since been made by the county council to the Local Government Board asking it to exercise its compulsory powers but the board declines to do so. On Wednesday

Jan. 27th, at the quarterly meeting of the Durham County Council, the position was discussed on a consideration of the report of the Health Committee, during which discussion Lord Ravensworth remarked: "Evidently the warning they once received and the frightful examples of Lynn and Maidstone did not concern the local authority. The Local Government Board had the power to compel the local authority and why did they not exercise that power?"

DORSET COUNTY HOSPITAL.—The annual meeting of the subscribers of the Dorset County Hospital at Dorchester was held on Feb. 3rd under the presidency of Captain Acland. The report showed that during 1897 there had been 367 in-patients admitted, against 326 in 1896, and 972 out-patients had been treated, against 993 in the preceding year. The income during the year was £2452 and the expenditure £2411.

DIPHTHERIA IN LONDON.—There has been sensible and continued diminution of diphtheria prevalence in London during the first four registration weeks of the current year ended on Jan. 29th as compared with preceding periods of like duration. The 1119 notified cases during the period ended on Dec. 4th fell to 1064 in the four weeks to Jan. 1st, but the 198 deaths in the former increased to 230 in the latter period. In the four last weeks of 1897 the 1064 cases and the 230 deaths yielded a case mortality of 21·6 per cent.; and whilst all districts save one in London were invaded eight had each 50 attacks and upwards with an aggregate of 515, or nearly half the total. On the other hand, other eight districts had only 30 cases in all. But during the period ended Jan. 29th all the sanitary areas of London were invaded, yielding, however, only 901 attacks; the 163 registered deaths furnishing a case mortality of 18·1 per cent. Only three districts had 50 cases and upwards each, with an aggregate of 201 attacks; and other four districts had only 8 cases in all. Thus the amount and fatality of diphtheria in London in January alike favourably compare with the data of the closing weeks of last year. The decline was fairly uniformly distributed. In the December period the successive weekly totals of cases were 294, 277, 212, and 281, showing an average of 266 weekly; in January the totals were 231, 192, 200, and 278, or an average of 225, with a distinct upward tendency at the close of the month. The deaths registered weekly in the December period were 58, 63, 56, and 53, and averaged 57; and in January 50, 44, 33, and 36, an average of 41 weekly. The deaths registered from diphtheria in London in the week ended Feb. 5th numbered 42. In the outer ring the registered deaths in the successive weeks of the December and January periods have been 20, 16, 17, and 13 in the former, amounting to 66; and 15, 10, 7, and 15, in January, amounting to 47. So that here also the decline has been a substantial one.

THE SHEFFIELD MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 20th, Mr. Reckless, ex-President, being in the chair. Dr. Gwynne showed a case of Hodgkin's disease. The patient, a girl, aged nine years, had been suffering from the disease for three and a half years. It came on after whooping-cough. The glands on the right side of the neck became enormously enlarged and as the breathing became embarrassed from the pressure they were excised on two occasions, there being an interval of two and a half years between the operations. The spleen, which was noticeably enlarged about a year and a half ago, now filled most of the abdominal cavity in front. An examination of the blood in a specimen taken after a meal showed 4,800,000 red and 11,000 white corpuscles per cm. The hæmoglobin was reduced below normal. The ordinary remedies did no good in this case. Some temporary improvement followed a course of bipalatinoids of ferrous carbonate and red marrow.—Mr. Pye-Smith showed a Papillomatous Growth which he had removed from the bladder.—Mr. Archibald Cuff showed a specimen of Malignant Growth of the Kidney obtained by operation; also a Renal Calculus which he had removed.—Mr. Lee showed the following specimens: (1) Heart with Patent Foramen Ovale and Diseased Aortic and Mitral Valves; (2) Sarcoma of the Kidney with Secondary Growths causing Fractures of the Humerus and Dorsal Vertebra; (3) Cancer of the Lung; and (4) Aneurysm of the Aorta, which had ruptured.—Dr. Arthur Hall showed a case of Ringworm of the Scalp which appeared analogous to the Kerion of Celsus.—Dr. Wearne Clarke showed a Fœtus with Craniorhachisis.—Dr. Birmingham read a paper entitled a New Mode of Treatment applicable to many of the Major Affections of the Respiratory System.—Mr. Reckless, Dr. Porter, Mr. Pye-Smith, Mr. Cuff, Dr. James Martin, Dr. Sweeten, Dr. Gwynne, Dr. Addison, Dr. Richards, and Dr. Wearne Clarke made remarks.

MEDICAL MAGISTRATE.—Mr. John A. Robertson, M.B., C.M. Edin., of Matjesfontein, Cape Colony, has been appointed a Justice of the Peace for the District of Worcester, Cape Colony.

ROYAL UNITED HOSPITAL, BATH.—The annual meeting of this institution was held at the Guildhall, Bath, on Jan. 31st under the presidency of the mayor. The report showed that the total expenditure was £6225, being £430 less than in 1896. The medical report showed that during the year 1264 in-patients had been admitted as against 1348 in 1896. The out-patients numbered 8987 as against 9698 in 1896. The committee alluded to the great loss the hospital had sustained by the deaths of Mr. T. G. Stockwell, F.R.C.S. Eng., who had been connected with the institution for thirty-three years, and Mr. H. W. Freeman, F.R.C.S. Irel., who for sixteen years had been on the staff. The Rev. E. Handley was elected president for the tenth time.—As the result of the late amateur theatrical week in Bath, due to the energy of Dr. Lionel Weatherly, the Royal United Hospital has benefited to the extent of £300.—Sir Squire Bancroft's recent reading produced £112 for the institution.

ABUSES IN NEW YORK HOSPITALS.—The annual report of the Visiting Committee of the State Charities Association Department has recently been issued and reveals the fact that the management of some of the hospitals in New York City is not by any means satisfactory. This is particularly the case with the Children's Hospital on Randall's Island. At the Foundling Hospital, indeed, the death-rate amongst its inmates has been so high that the public press of New York has taken the matter up and is agitating for reforms in the present methods of management. The mortality among the children in the Infants' Hospital, not including children over two years of age, according to official reports, for the year ending Oct. 1st, 1896, and the year ending Oct. 1st, 1897, was as follows: Foundlings: 1896, 78 per cent.; 1897, 80 per cent. Other infants received without their mothers—1896, 60 per cent.; 1897, 59 per cent. Children received with their mothers—1896, 14 per cent.; 1897, 13 per cent. But a truer impression of the fate of the children cared for by other than their own mothers in the infants' hospital is gained from the statement that of 366 infants admitted when under six months of age twelve remained alive on April 15th, 1897—a death-rate of 96·7 per cent. The average duration of life of the 354 children who died was between five and six weeks. Of the twelve surviving children two were bottle-fed and ten were nursed.

TYPHOID FEVER AT CAMBORNE.—At a meeting of the Camborne District Council held on Jan. 28th the chairman of the Special Sanitary Committee stated that Dr. Bruce Low had informed the committee that he was decidedly of opinion that the outbreak of typhoid fever at Boswyn was due to the contamination of the water-supply and he showed by diagrams that when there was a heavy rainfall a communication was established between Boswyn water-tank and a cesspool. Dr. Low also found that among 116 typhoid fever patients in Camborne district there were only four who lived outside the water-supply area, and three of these admitted drinking the suspected water. He also found that houses were attacked in an equal degree whether they were provided with proper water-closets and drains or with privies and cesspits. The general sanitary conditions were also much the same in the unaffected as in the affected areas, all which facts indicated that the disease was propagated by the water-supply. Dr. Low had visited the watersheds at Cargenwyn and Boswyn and had pointed out certain risks of contamination which were now being guarded against. He had, moreover, established that there was no foundation for the statement that this was the second outbreak of typhoid fever in the district during 1897. Mr. J. Telfer Thomas, the medical officer of health, reported that only three cases of typhoid fever had been notified since the last meeting and strongly urged the adoption of the Infectious Diseases Prevention Act.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Opening of the Session.

THE Houses of Parliament, which had been in recess since Friday, Aug. 6th, opened a new session on Tuesday, Feb. 8th. The opening ceremony took place as usual in the House of Lords, where, in the presence of the Speaker and many members of the House of Commons, the Royal message calling Parliament together was read by the Lord Chancellor.

Prospective Legislation.

Among the measures mentioned in the Queen's Speech were a Bil for the amendment of the Vaccination Law, a Bill for the constitution of a teaching university for London, a Bill for dealing in part with the subject of secondary education, and a Bill for preventing the adultera. tion of drugs and food.

Plague and Famine in India.

The following reference to these subjects was made in the Queen's Speech—viz., "The plague which appeared more than a year ago in Western India returned in the autumn, and although the mortality is less alarming than it was at this time last year it is still such as to cause anxiety. No effort will be spared by my Government in the endeavour both to limit its extent and to mitigate its effects; and I am confident that they will receive the loyal assistance of my Indian subjects in this arduous task. I rejoice, on the other hand, to inform you that the famine which prevailed for many months over several large districts may now be said to be at an end excepting within a small tract in Madras, and that there is reason to anticipate a prosperous year, both for agriculture and commerce, throughout my Indian dominions."

Adulteration of Food Products.

The Parliamentary Committee of the Central and Associated Chambers of Agriculture held a meeting on the day of the opening of the session, at which they passed a resolution expressing satisfaction with the assurance that it is the intention of the Government to introduce a Bill dealing with the adulteration of food products and, in the belief that the Bill will propose to give effect to the recommendations of the Select Committee of the House of Commons and thus satisfy the repeated demands made by the Chambers of Agriculture, urging the Government to proceed with the measure as soon as possible as a matter of urgent importance to the agricultural community.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANNING, GEORGE PAUL, M.R.C.S., L.R.C.P. Lond., has been appointed an House Physician to the General Infirmary, Leeds.

BARKEWELL, R. T., M.B., M.R.C.S., L.R.C.P., has been appointed Anæsthetist to the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, Bloomsbury, vice Dudley W. Buxton.

BEATTY, W. J., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed a Certifying Factory Surgeon for the Stockton District, vice J. Dale.

BENNETT, J. M., L.R.C.P. Irel., has been appointed Medical Officer for the Ruddington Sanitary District of the Basford Union, vice M. Carnelly.

BONSTEAD, R. J., L.R.C.P., L.R.C.S. Edin., D.P.H., has been re-appointed Medical Officer of Health by the Hexham Rural District Council.

BULLOCK, H. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Heston and Isleworth Urban District, vice T. W. Bullock.

BUXTON, D. W., M.D., B.S., has been appointed Consulting Anæsthetist to the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, Bloomsbury, London.

CARTER, W. ST. LEGER, L.R.C.P., L.R.C.S. Edin., has been re-appointed an Honorary Surgeon to the Liskeard Cottage Hospital.

CULLEN, G. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Harrington Urban District, vice J. Dick.

ELLIOTT, C. N., M.B., M.Ch. Dubl., has been re-appointed Medical Officer of Health by the Thrapston Rural District Council.

FRANCIS, S. B., M.B., C.M. Edin., has been appointed an Honorary Medical Officer for the Northern Branch of the Brighton, Hove, and Preston Dispensary.

GARDNER, WILLIAM, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Nunney District of the Frome Union.

GREEN, G. R., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the Ripon City Council.

HALSTON, R., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Surgeon to the Liskeard Cottage Hospital.

HAMMOND, WM., L.R.C.P. Edin., M.R.C.S., has been re-appointed an Honorary Surgeon to the Liskeard Cottage Hospital.

HARLAND, G. R., L.R.C.P. L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed an Assistant Medical Officer for the Workhouse of the Gateshead Union.

HOLLINSHEAD, F., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer by the King's Norton Rural District Council.

HYATT, JAMES TAYLOR, M.R.C.S., L.R.C.P. Edin., D.P.H. Cantab., has been re-elected Medical Officer of Health by the Shepton Mallet Urban District Council.

ILOTT, A. T., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Surgeon to the Liskeard Cottage Hospital.

JAMES, FITZGERALD, B.A., M.B., C.M., has been appointed House Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

JONES, J. F., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer by the Llansilin District Council.

LYNE, W. H., L.S.D., R.C.S., has been re-appointed an Honorary Dental Surgeon to the Liskeard Cottage Hospital.

MAPLES, R., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Kingsclere District Council.

MORCOM, A., L.R.C.S. Edin., has been re-appointed Medical Officer of Health by the Dunstable Urban District Council.

MORGAN, G. F. C., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Honorary Physician to the Hartlepool Hospital.

NETTLE W., M.R.C.S., has been re-appointed an Honorary Surgeon to the Liskeard Cottage Hospital.

OWEN, ARTHUR DUNLEY, B.Sc., M.R.C.S., L.R.C.P. Lond., has been appointed Government Surgeon at Enkeldoorn, Rhodesia, S. Africa.

PORRITT, ERNEST E., M.B., C.M., has been appointed House Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

PRONGER, C. E., F.R.C.S., L.R.C.P. Lond., has been appointed a Medical Officer to the Harrogate Cottage Hospital.

RACE, J. PERCY, L.S.A. Lond., has been appointed Junior House Surgeon to the Ancoats Hospital, Manchester.

RIMELL, A. T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Tydd St. Mary District of the Holbeach Union.

SMITH, T. WILSON, M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Honorary Physician to the Royal United Hospital, Bath, vice T. Cole.

SUTHERLAND, G. A., M.A., M.D., M.R.C.P., has been appointed Assistant Physician to the North-West London Hospital, Kentish Town-road.

THEOBALDS, A. J. A., M.B., C.M. Edin., has been appointed Medical Officer for the Wargrave Sanitary District of the Wokingham Union.

THOMAS, THOMAS MORRELL, M.B., M.S. Lond., F.R.C.S. Eng., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Ophthalmic Surgeon to the Newport and Monmouthshire Hospital, vice H. C. Ensor.

WILKINSON, J. B., M.D. Edin., D.P.H. Vict., has been appointed a Medical Officer by the Oldham Town Council.

WOOD, W. B. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Bromsgrove Cottage Hospital.

YOUNG, F. C., M.B., B.C. Camb., has been appointed Medical Officer for the Twyford Sanitary District of the Wokingham Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary £100 per annum, with rooms and attendance (not board).

CITY OF LIVERPOOL INFECTIOUS DISEASES HOSPITAL, Park-hill.—Resident Medical Officer at the City Hospital, Park-hill, unmarried. Salary £120 per annum, increasing £10 per annum to £140 (subject to certain conditions). Applications to the Town Clerk, Town Clerk's Office, Liverpool.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Surgeon for six months. Board, residence, &c. are provided, and an honorarium of 15 guineas, conditionally.

FLINTSHIRE DISPENSARY. Resident House Surgeon. Salary £120 a year, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or in lieu thereof £20 per annum. Applications to the Secretary, Board-room, Bagillt-street, Holywell, North Wales.

FROME UNION.—Medical Officer for the Coleford Medical District. Salary £30. Midwifery, 10s. per case. Certifying lunatics, 10s. per case. Application to the Clerk, Public Offices, Frome.

GENERAL HOSPITAL, Birmingham.—Two Assistant House Physicians for six months. Residence, board, and washing provided.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION, Gloucester.—Surgeon.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Anæsthetist.

JOINT COUNTIES ASYLUM, Carmarthen.—Resident Clinical Assistant. Board, &c., and honorarium.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence in the hospital, board, and washing provided, and an honorarium given conditionally.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Medical woman as Clinical Assistant in the Out-patient Department for one year.

ORIOLET COTTAGE HOSPITAL, Loughton.—Honorary Pathologist. Hororarium £10 to cover travelling expenses.

ROYAL LANCASTER INFIRMARY.—House Surgeon, unmarried. Salary £80 a year, with residence, board, attendance, and washing.

ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, S.E.—Honorary Surgeon.

SHEFFIELD ROYAL HOSPITAL.—House Physician for one year, unmarried. Board (exclusive of wine and beer) and lodging provided, and an honorarium of 25 guineas given.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow.—Junior House Surgeon for six months. Salary at the rate of £40 per annum, with board, lodging, and laundry.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary £70 per year, with residence, board, and washing.

SUFFOLK COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried, for three years. Salary £100 a year, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, County Asylum, Melton, Suffolk.

SUNDERLAND BOROUGH ASYLUM.—Medical Superintendent. Salary £350 a year, with furnished house, board for self and wife (if married), washing, coals, light, two servants, and use of garden. Applications to the Clerk to the Visiting Committee, Town Hall, Sunderland.

TOTTENHAM HOSPITAL.—House Surgeon. Salary £40 per annum, and board, washing, and lodging in the Institution.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Physician for twelve months. Honorarium £50, with board and lodging in the hospital.

WALLASEY DISPENSARY.—House Surgeon, unmarried. Salary £150 per annum, with furnished house, coal, and gas. Applications to Mr. Wm. Heap, Elm Mount, Penkett-road, Liscard, Cheshire.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board, &c.

WISBECH UNION.—Medical Officer and Public Vaccinator for the first, second (A), and eighth districts of the Union. Salary for the first district £70 per annum, for the second (A) district £10 per annum, and for the eighth district £15 per annum, with the extra fees prescribed by the Local Government Board. Applications to the Clerk, Union Offices, Wisbech.

Births, Marriages, and Deaths.

BIRTHS.

CRAWNER.—On Feb. 2nd, at Hill House, Clay Cross, the wife of Alfred Crawner, L.R.C.P., M.R.C.S., of a daughter.

COLEMAN.—On Feb. 4th, at Dudbrook House, Clacton-on-Sea, the wife of Percy Coleman, M.B., B.S., of a son.

FRASER.—On Jan. 31st, at Sandown Lodge, Brixton-road, the wife of E. Fraser, M.D., of a son.

MURRAY.—On Feb. 8th, at Alndyke, Beckenham, the wife of Percy Hope Murray, M.B., of a son.

SUMPTER.—On Feb. 9th, at Hunstanton, Norfolk, the wife of Berners George Sumpter, M.B. Durh., M.R.C.S., of a daughter.

WOOD.—On Feb. 7th, at Elm House, Ipswich, the wife of Arthur T. Wood, M.R.C.S., of a son.

MARRIAGES.

FAIRWEATHER—WELDON.—On Feb. 5th, at St. Michael's, Bowes-park, David Fairweather, M.A., M.D., to Jeanie Miller, widow of W. Urquahart Weldon.

HUMPHRIS—HESKETH.—On Jan. 20th, at the Church of the Resurrection, Brussels, by Rev. N. S. Hodson, chaplain, assisted by Rev. Dr. Ker Gray, incumbent of St. George's Chapel, Albemarle-street, London, and Rev. J. Thompson, F. Howard Humphris, M.D., M.R.C.P., eldest son of F. H. Humphris, J.P., Ilkley, to Ethel Marion, eldest daughter of Colonel Hesketh, I.S.C.

PIKE—MARKLAND.—On Jan. 3rd, at St. Martin's-in-the-Fields, W., Norman Howard Pike, M.B., B.S. (Lond.), of Heckmondwife, Yorks, to Clara, daughter, of John Markland, of Pudsey, Yorks.

SIDEBOTTOM—NOWELL.—On Feb. 7th, at the parish church, Halifax, Thomas Sidebottom, M.B., C.M., Bardney, Lincolnshire, to Edith, eldest daughter of Thomas Palethorpe, Esq., Milton-place, Halifax.

WILSON—OWEN.—On Feb. 8th, at St. John's Episcopal Church, Edinburgh, by the Rev. G. J. Cowley Brown, incumbent, Andrew Robertson Wilson, M.A., M.B., C.M. (Edin.), of Trafford House, Liscard, Cheshire, younger son of the late Charles Edward Wilson, LL.D., H.M. Senior Inspector of Schools, to Alice, daughter of the late Rev. Joseph Owen, D.D., Allahabad, India, and Mrs. Owen, 21, Athole crescent, Edinburgh.

DEATHS.

CARMALT JONES.—On Feb. 2nd, at his residence, 6, Westbourne-street, Hyde Park, T. W. Carmalt Jones, F.R.C.S. Edin., late Surgeon of the Central Hospital for Diseases of the Throat and Ear, and late of Abchurch House, E.C., in his 51st year; eldest son of the late Thomas Jones, Q.C.

CREASY.—On Feb. 8th, at Bath, after a short illness, James Gideon Creasy, surgeon, late of Brasted, and Wrotham, Kent, aged 68 years. Funeral takes place at Brasted on Saturday at 1.30. Friends please accept this the only intimation.

LUND.—On Feb. 4th, at his residence, Victoria-road, Whalley Range, Edward Lund, F.R.C.S., in his 75th year.

SHEPHERD.—On Feb. 3rd, at Pau, France, Robert John Shepherd, M.D., eldest son of the late Robert Walter Mexborough Shepherd, aged 51.

SMITH.—On Feb. 6th, at the residence of his father, Albert John Smith, M.R.C.S. Eng., L.R.C.P. Lond., eldest son of John Smith, M.R.C.S. Eng., L.S.A. Lond., of 23, Park-road, Plumstead, aged 25 years.

WOODHOUSE.—On Feb. 2nd, at Park House, Surbiton, John Woodhouse, M.D., in his 90th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 10th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Feb. 4	29·36	N.	0·07	47	42	40	41	42	Raining
,, 5	29·81	N.	0·17	65	45	33	32	35	Fine
,, 6	29·80	S.W.	0·08	54	48	30	44	45	Raining
,, 7	29·76	W.	...	71	47	36	36	37	Overcast
,, 8	30·03	N.W.	0·05	67	50	36	37	38	Hazy
,, 9	30·21	S.W.	...	58	49	35	35	36	Foggy
,, 10	30·28	S.W.	...	65	52	36	43	45	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (16th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (17th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (19th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (14th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Dr. S. Taylor: Case of Innominate Aneurysm.—Mr. S. Boyd: Case of Removal of the Frontal Bone for Tuberculosis.—Mr. M. Ling: Case of Empyema after Operation.—Dr. M. Dockrell: Case of Angeioma Serpiginosa.—Mr. W. H. Evans: Case of Unusual Ricketty Deformity of the Knee.—Dr. R. Maguire: A Demonstration of Palpation and Auscultatory Percussion.—Mr. W. H. Battle: (1) A Patient after the Operation for Removal of the Appendix Vermiformis; (2) Plastic Operation after Removal of Extensive Rodent Ulcer of the Face; (3) Partial Intrauterine Amputation of Leg.

TUESDAY (15th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Littlewood: Sarcoma of the Tongue.—Mr. P. Furnivall: An Unusual Cyst of the Tongue.—Dr. C. H. Bond: A Case of Post-mortem Emphysema of the Liver.—Dr. Voelcker: Ulceration of Caseous Gland into a Bronchus, Death from Asphyxia.—Dr. C. Ogle: Ulceration of Caseous Gland in the Trachea with a rapidly fatal result.—Dr. Freyberger: Double Hydronephrosis with Calculi in the Right Kidney. Mr. Littlewood will show several card specimens.

ROYAL STATISTICAL SOCIETY (Royal United Service Institution, Whitehall, S.W.).—5 P.M. Mr. E. Cannan: Demographic Statistics of the United Kingdom, their want of Correlation and other Defects.

WEDNESDAY (16th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. T. C. White: Micro-crystallography (with lantern illustrations). Mr. J. E. Barnard: Exhibition of Miscellaneous Lantern Slides.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Discussion on the Beneficial Effect of one Disease upon another (opened by Dr. H. Campbell). Dr. S. Phillips, Dr. J. Taylor, Dr. M. Sibley, Dr. Sutherland, Mr. C. B. Lockwood, Mr. Mansell Moullin, Mr. Templeton, and others are expected to take part.

THURSDAY (17th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, W.).—8.30 P.M. Dr. S. West: Granular Kidney and the Reasons why it is often Overlooked.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—Prof. A. D. Waller: The Dosage of Anæsthetics.

SOCIETY OF ARTS (Imperial Institute, South Kensington).—4.30 P.M. Mr. H. M. Birdwood: The Plague in Bombay (illustrated with lantern views, charts, &c.).

FRIDAY (18th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Surg.-Capt. L. Rogers: The Relationship of Variations of the Ground-water Level to the Incidence and Seasonal Distribution of Malarial Fevers in India.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (14th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. T. G. Brodie: The Place of Formation and Chemical Properties of the Antitoxins. (Arris and Gale Lecture.)
LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. H. Tilley: Examination of the Ear, Throat, and Nose.

TUESDAY (15th).—WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4.30 P.M. Dr. H. Campbell: On Peripheral Neuritis, with cases.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Tooth: Cranial Nerves.
ROYAL INSTITUTION.—3 P.M. Prof. E. Ray Lankester: The Simplest Living Things.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Mania—Acute, Hysterical, Acute Delirious.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Acne and Rosacea.
CITY ORTHOPÆDIC HOSPITAL.—5.30 P.M. Mr. J. J. Clarke: The Principles of Instrumental Treatment of Deformities.

WEDNESDAY (16th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. T. G. Brodie: The Place of Formation and Chemical Properties of the Antitoxins. (Arris and Gale Lecture.)
WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. G. L. Cheatle: Treatment of Injection in Surgical Cases.
LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Refuse Removal and Disposal.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Wethered: Cavities in Pulmonary Tuberculosis.

THURSDAY (17th).—CHARING-CROSS HOSPITAL.—4 P.M. Mr. J. Astley Bloxam: Selected Surgical Cases in the Wards. (Post-graduate Class.)
THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow: Clinical Lecture or Demonstration of Recent Specimens.
LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students—Cardiac Disease.
LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W.—5.30 P.M., Mr. J. Cantlie: Treatment of Hepatitis.

FRIDAY (18th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. T. G. Brodie: The Place of Formation and Chemical Properties of the Antitoxins. (Arris and Gale Lecture.)
ROYAL INSTITUTION.—9 P.M. Prof. L. C. Miall: A Yorkshire Moor.
LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: The Microscope and Methods of Cultivation.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1897, which was completed with the issue of Dec. 25th, and the Title-page to the Volume, were given in THE LANCET of Jan. 1st.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

A QUESTION OF FEES FOR MEDICAL ASSISTANCE TO THE CORONER.

To the Editors of THE LANCET.

SIRS,—On the 27th ult. I was asked to attend a coroner's inquest on the death of a woman who died under somewhat peculiar circumstances. I attended and gave evidence. The jury not being satisfied were unanimous in declaring that a post-mortem examination should be made. I received formal notice from the coroner to perform the post-mortem examination and give evidence thereon, both of which duties I duly performed. The coroner when paying me said I was entitled to two guineas—one for the "inquest," the other for the post-mortem examination and evidence. On page 211 of Welcome's Medical Diary I find that I am entitled to (*a*) one guinea for inquest and (*b*) two guineas for post-mortem examination and evidence thereon. The coroner would not listen to me when I claimed £3 3*s.* for the various duties. Would you kindly let me know what I am entitled to and if I am entitled to £3 3*s.*, how can I act in order to obtain it? I may say I accepted £2 2*s.* from the coroner without prejudice and told him I should look further into the matter. I am, Sirs, yours faithfully,

Feb. 1st, 1898. M.D.

*** The fee for giving medical evidence at a coroner's inquest is £1 1*s.*; that for giving medical evidence and performance of a post-mortem examination is £2 2*s.* Our correspondent holds that he should receive £1 1*s.* for giving evidence on the first occasion, when the jury were unsatisfied, and £2 2*s.* for giving evidence after performing the post-mortem examination. The coroner's view is that a fee of £2 2*s.* covers the performance of the post-mortem examination and *both* attendances to give evidence. It is our opinion that the coroner is right.—ED. L.

"A SURGICAL QUESTION."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 5th "F.R.C.S." asks for cases of recovery without gangrene after simultaneous ligature of both popliteal artery and vein. Here are references to two cases:—Teale: THE LANCET, Jan. 1st, 1887, p. 12; for bullet wound: Centralblatt für Chirurgie, 1897, S. 1181. I am, Sirs, yours faithfully,

Brook-street, W., Feb. 4th, 1898. WALTER G. SPENCER

ODD MAGAZINES.

R. D. desires us to say that he has at the present moment some thirty or forty odd magazines, all dated during the last year or two—*Windsor*, *Strand*, *English Illustrated*, *Cornhill*, &c.—which he will be happy to give to any London charity of any sort where they will be of use. He hesitates to send them off to the nearest hospital as he does not want to have the appearance of emptying the lumber of his bookshelves where it may not be wanted, but he thinks that there may be sick people who would like to have a little light assorted reading. Answers to his offer may be sent addressed, R. D., care of THE LANCET, 423, Strand, W.C.

DISCOVERY OF PYGMIES IN SOUTH AMERICA

IT is reported by the *New York Tribune* that a Boston man named Sullivan, who lately returned from South America, has discovered a remarkable race of dwarfs inhabiting the valley of the Amazon. Mr Sullivan gives an account of his discovery in the following words: "I met while on the Rio Negro, one of the tributaries of the Upper Amazon, a race of remarkably small people who were more likely of an Indian than a negro origin judging from their hair and the peculiar colour of their skin, which was a brilliant, livid, reddish-yellow. They are very ugly in shape. Their stomach, which is distended in the back as well as in front, is big and out of all proportion to their tiny, spindling arms and legs. I think this is caused by their anaconda-like practice of gorging. After a hunt they will eat like animals and then lie listlessly in the hot tropical sun for days till hunger again impels them to get more game. Curiously enough, they appear to be metal-workers, and tip their darts with bits of hardened iron made from native ores. These dar

are projected from a blow-gun with deadly effect. It appeared, as far as could be ascertained, that their home was at the head waters of the Orinoco or else that part of Venezuela near the Brazilian border or Rio Negro watershed. These people are not more than four feet eight inches in height and the women are less than this. They have tribal marks that cover the upper body and head made by slits in the skin. Their huts are sometimes constructed of mud, in which case they are low and resemble a half egg with an opening at one end called 'masango.' I am informed that some of them have some idea of ugly specimens of clay pottery. They have fetish doctors who perform cures on any disease from which their patient may suffer by applying to a particular god according to a patient's ability to pay." Mr. G. Haliburton, of Boston, a fellow of the Royal Geographical Society, has taken a great interest in Mr. Sullivan's discovery. Mr. Haliburton is a great authority on dwarf races. He thinks it of great value to anthropologists to have the tradition of pygmy races in South America recorded by Humboldt in the first years of this century so strangely verified. Humboldt said these pygmies were supposed to inhabit the country at the head of the waters of the Orinoco, but he did not visit that region and suggested that the rumours of this strange race of men were unfounded. Martins stated that he saw a radical dwarf at Para, but little further has been learned on the subject though Markham gives the names of two dwarf tribes with the list of Indian tribes in the valley of the Amazon published by the Anthropological Institute of London in January, 1896. Mr. Sullivan's observations should go far towards clearing up the subject and confirming the hitherto unauthenticated rumours as to the existence of numerous pygmy tribes in Guiana and Venezuela. It would also appear from Mr. Sullivan's somewhat meagre description of the dwarfs whom he encountered in South America that they resemble in appearance and habits the pygmies met with by Dr. Donaldson Smith in Africa a few years ago.

A QUESTION OF CLIMATE.

To the Editors of THE LANCET.

SIRS,—Could any of your readers kindly inform me of any healthy spot in Germany or Switzerland where the climate in winter is mild and in summer not too relaxing and where a European girl, aged eight years, born and bred in Burmah, could live *en pension* with her mother and obtain educational advantages? Any information would be thankfully received.

I am, Sirs, yours faithfully,
Feb. 7th, 1898. A. Z.

YELK OR WHITE?

THE following case has been submitted to us. A patient, whom we will call A, who had just recovered from an illness was recommended by his medical adviser to take the yelk of an egg several times a day in preference to the white in order to regain his strength. B, a friend of A, had some time before been ordered eggs by an eminent medical man, but was recommended to take the white in preference to the yelk as the most strength-giving. Both A and B maintain that their respective medical men are right and are anxious for the opinion of THE LANCET on this subject or a reference to an authority by which they can settle their dispute. According to Dr. Burney Yeo in his work on "Food in Health and Disease," p. 71, the yelk is of more importance than the white from an alimentary point of view, as it contains a quantity of fat as well as a peculiar form of albumen, whereas the white is chiefly a simple solution of albumen. Possibly, therefore, it has been thought desirable to exclude an excess of albumen in A's diet and an excess of fat in B's.

THE DEFINITION OF PUERPERAL FEVER.

To he Editors of THE LANCET.

SIRS,—I should be glad to know whether all cases of peritonitis occurring at childbirth are to be reported as cases of puerperal fever under the Notification Act, from whatever cause arising? I have had a case recently where there appeared to have been inflammation before the labour came on and where, as a consequence of having to detach an adherent placenta, unmistakeable peritonitis set in with great severity *immediately* after.

I am, Sirs, yours faithfully,
Feb. 8th, 1898. INQUIRER.

THE FLOORING OF A COTTAGE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Will any of your readers who have had experience in the matter kindly state in your columns what they consider the most suitable material for flooring the wards of a small cottage hospital?

I am, Sirs, yours faithfully,
Watton, S.O., Norfolk, Feb. 7th, 1898. H. MALLINS, M.B.

PROTECTION FROM THE HEAT OF THE SUN.

WE have received particulars of a little invention known as "Sewell's Head and Spine Protector," which will be appreciated by pedestrians and cyclists when walking or riding under the rays of the sun. It consists simply of a gauze shade intended to be worn over an ordinary hat and weighs only 2½ oz. Besides serving the purpose of protecting the head and spine of a cyclist from the sun's rays we should think that it would also afford some protection against the inconveniences and dangers of wind and dust. The address of the inventor is Heavitree, Exeter.

TINEA TONSURANS IN AN ADULT.

TINEA tonsurans in the adult is an event of great rarity. At a recent meeting of the Dermatological Society of London Dr. Aldersmith presented a man, aged twenty-three years, who had contracted the disease from a hairbrush used by a younger brother who had ringworm. There was only one patch and the majority of the hairs grew healthily and firmly but scattered here and there were numerous black dots, and very short stumps, some of which were in the form of little corkscrews. The skin of the patch was smooth. Such a case would probably have been overlooked without a careful examination with a lens. The stumps were so fragile that one could not be extracted entire. They were saturated with a large spore form of fungus—Trichophyton megalosporon endothrix. The modified manner in which the fungus grew in this case as compared with the tinea tonsurans of children is interesting, the unfavourable nature of the soil being evident.

ANATOMY IN THE COUNTY COURT.

A COUNTY court judge ought to be a very Solomon for omniscience if he is to give a right decision upon the varied questions that come before him. On Feb. 9th, Judge Lumley Smith, Q.C., at Westminster county court had a very delicate matter before him. The Katerine Spécialité Corset Company represented by Mary Green argued that a firm of dressmakers owed them £4 14s. 6d. for a pair of corsets supplied to a customer. She met the customer in the street wearing the articles in question. The judge naturally inquired how she knew and the plaintiff replied: "By the special curve in the figuration." The judge and the plaintiff thereupon examined the corsets in question and one of the defendants pointed out the defects. The French fitter said they were not French cut, to which the plaintiff replied that she had studied the anatomy of the English figure and not the French, for there was a vast difference. Eventually judgment was given for the defendants. Anatomy and fashion are, as a rule, in direct opposition; we should like to know upon which ground the judge took his stand.

THE INTERNAL ADMINISTRATION OF IODOFORM.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any of yours readers would inform me of the best way of administering iodoform internally, the dose, and the times it ought to be taken.

I am, Sirs, yours faithfully,
A. G. P. GIFFS, Staff Surgeon, Royal Navy.
Craven House, W.C., Feb. 10th, 1898.

"*Seen and Heard.*"—Our attention has been drawn to the paragraph thus headed, but we have also seen, what our correspondent seems to have missed—that the medical man to whom reference was made has written to the paper regretting the appearance of a notice which "though meant in all kindness may be misconstrued." Under these circumstances we are glad to think that there is nothing more to be said.

Fairplay.—We should prefer to hear more before publishing a letter containing grave accusations of "unfairness" and "bullying" on the part of the examiners. Under what circumstances did our correspondent require what reagent?

C. H.—We have decided not to continue the correspondence until some new points arise requiring notice.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Eastern Morning News, Bradford Daily Telegraph, Northampton Daily Reporter, Staffordshire Sentinel, Sheffield Telegraph, Western Morning News, Times of India, Pioneer Mail, Birmingham Mail, Builder, Dundee Advertiser, North British Daily Mail, Middlesborough Telegraph, Royal Cornwall Gazette, Architect, Harrogate Advertiser, Liverpool Daily Post, Halifax Guardian, Keighley News, Doncaster Chronicle, Cambridge Express Carlisle Express, Sussex Daily News, Carpenter and Builder Newport Advertiser, Croydon Guardian, Kelso Mail, Market Harboro' Advertiser, Daily Chronicle, Leicester Daily Mercury, South Wales Daily Argus, North Eastern Daily Gazette, Surrey Advertiser Leeds Mercury, Oban Times, Yorkshire Post, Citizen, Scotsman, Peterborough Advertiser, Bristol Mercury, Newcastle Leader, Accrington Observer, Kendal Mercury, Hampshire Post, Manchester Guardian, Shrewsbury Chronicle, Kentish Express, Cumberland Advertiser, Berkshire Chronicle, Wigan Examiner, Walsall Observer, Kidderminster Shuttle, Burton Chronicle, Southampton Observer, Essex County Chronicle, Leicester Mercury, Norwich Mercury, Herald of Wales, Portsmouth Times, Surrey Times, Preston Herald, Eastern Daily News, Western Chronicle, Carnarvon Herald, Sanitary Record, Mining Journal, Hertfordshire Mercury, Public Health, Engineer, City Press, Local Government Chronicle, Reading Mercury, Local Government Journal, Lancaster Observer, Weekly Free Press and Aberdeen Herald, Evening Chronicle (Newcastle-on-Tyne), West Middlesex Herald, c&., &c.*

Communications, Letters, &c., have been received from—

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